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SPECIAL CONSULAR REPORTS.

FOREIGN MARKETS

FOR

AMERICAN COAL.

VOL. XXI—PART I.

REPORTS FROM CONSULS OF THE UNITED STATES IN ANSWER TO
INSTRUCTIONS FROM THE DEPARTMENT OF STATE.

Issued from the Bureau of Foreign Commerce,
Department of State.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1900.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.[1]

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—Commercial Relations, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—Consular Reports, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—Advance Sheets, Consular Reports, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—Exports Declared for the United States, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—Special Consular Reports, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as Consular Reports No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1897; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications, except Tariffs in Central America, etc., are exhausted, and the Department is, therefore, unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled Special Consular Reports. There are now the following Special Consular Reports:

Vol. 1 (*1890*).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (*1890 and 1891*).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (*1891*).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (*1891*).—Port Regulations in Foreign Countries.

Vol. 5 (*1891*).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (*1891 and 1892*).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (*1892*).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (*1892*).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (*1892 and 1893*).—Australian Sheep and Wool, and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (*1894*).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (*1894*).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (*1895*).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (*1896 and 1897*).—Money and Prices in Foreign Countries.

Vol. 14 (*1898*).—The Drug Trade in Foreign Countries.

Vol. 15 (*1898*).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (*1899*).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia. Part IV. Africa. Part V. Australasia and Polynesia. (Parts III, IV, and V not yet published.)

Vol. 17 (*1899*).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (*1900*).—Merchant Marine of Foreign Countries.

Vol. 19 (*1900*).—Paper in Foreign Countries, and Uses of Wood Pulp.

Vol. 20 (*1900*).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Stave Trade in Foreign Countries.

Vol. 21 (*1900*).—Part I. Foreign Markets for American Coal.

Of these Special Consular Reports, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly Consular Reports, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving Consular Reports regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to Consular Reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

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[1] Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

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VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint. and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to $20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to January 1, 1900, have been prepared to assist in computing the values in

American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the basis of latest valuations. When it is taken into account that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891–1895 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—*Countries with fixed currencies.*

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S.gold.	Coins.
Argentine Republic[1]	Gold and silver.	Peso	$0.96,5	Gold—Argentine ($4.82,4) and ½ Argentine; silver—peso and divisions.
Austria-Hungary[2]	Gold	Crown	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Gold and silver.	Franc	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil	Gold	Milreis	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	do	Dollar	1.00	
British Honduras	do	do	1.00	
Chile	do	Peso	.36,5	Gold—escudo ($1.25), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Costa Rica	do	Colon	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centisimos.
Cuba	Gold and silver.	do	.92,6	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown	.26,8	Gold—10 and 20 crowns.
Egypt	do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland	do	Mark	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Gold and silver.	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark	.23,8	Gold—5, 10, and 20 marks.
Great Britain	do	Pound sterling	4.86.6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Gold and silver.	Drachma	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	do	Gourde	.96,5	Silver—gourde.
Italy	do	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver, 5 lire.
Japan[3]	Gold	Yen	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	do	Dollar	1.00	
Netherlands[4]	Gold and silver.	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.

[1] In 1874 and 1875 the gold standard prevailed.

[2] The gold standard was adopted October 1, 1892. (See Consular Reports, No. 147, p. 623.) Values are still, however, frequently expressed in the florin or gulden, which is worth 2 crowns or 40.6 cents.

[3] Gold standard adopted October 1, 1897. (See Consular Reports, No. 201, p. 259.)

[4] See note to table of fluctuating currencies.

A.—*Countries with fixed currencies*—Continued.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Newfoundland	Gold	Dollar	1.01,4	Gold—$2 ($2.02,7).
Portugal	do	Milreis	1.08	Gold—1, 2, 5 and 10 milreis.
Russia[1]	do	Ruble	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.80); silver—¼, ½, and 1 ruble.
Spain	Gold and silver.	Peseta	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway	Gold	Crown	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver.	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	do	Peso	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela	Gold and silver.	Bolivar	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

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[1] For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—*Countries with fluctuating currencies, 1874-1890.*

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary[1]	Silver	Florin	$0.47,6	$0.45,3	$0.45,3	$0.41,3	$0.40,1	$0.39,8
Bolivia	do	Dollar until 1890; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America	do	Peso	.96,5	.91,8	.91,8	.83,6	....	....
China	Silver	Haikwan tael	1.61	1.61	....	....	....	....
Colombia	do	Peso	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador	do	do	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt[2]	Gold	Pound (100 piasters).	....	....	4.97,4	4.97,4	4.90	4.90
India	Silver	Rupee	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan	Gold	Yen	.99,7	.99,7	.99,7	.99,7	....	....
	Silver		....	....	....	....	.87,6	.86,9
Mexico	do	Dollar	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands[3]	Gold and silver.	Florin	.40,5	.38,5	.38,5	.40,2	....	....
Peru	Silver	Sol	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia	do	Ruble	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli	do	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary[1]	Silver	Florin	$0.39,3	$0.37,1	$0.35,9	$0.34,5	$0.33,6	$0.42
Bolivia	do	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America	do	Peso	....	....	....	.69,9	.68	.85
Colombia	do	do	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador	do	do	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt[2]	Gold	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India	Silver	Rupee	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan	Gold	Yen	....	....	.99,7	.99,7	.99,7	.99,7
	Silver		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico	do	Dollar	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru	Silver	Sol	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia	do	Ruble	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli	do	Mahbub of 20 Piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

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[1] The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see Consular Reports, No. 147, p. 623) established the gold standard.

[2] The Egyptian pound became fixed in value at $4.94,3 in 1887.

[3] The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—*Quarterly valuations of fluctuating currencies.*

Countries.	Monetary unit.	1897.				1898.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia	Silver boliviano	$0.47,4	$0.46,8	$0.44,3	$0.41,2	$0.42,4	$0.40,9	$0.41,8	$0.43,6
Central America.	Silver peso	.47,4	.46,5	.44,3	.41,2	.41,4	.40,9	.41,8	.43,6
China	Amoy tael	.76,7	.75,7	.71,7	.66,4	.68,5	.66,2	.67,6	.70,6
	Canton tael	.76,5	.75,5	.71,5	.66,4	.68,3	.66	.67,4	.70,4
	Chefoo tael	.73,3	.72,4	.68,6	.63,7	.65,5	.63,3	.64,6	.67,5
	Chinkiang tael	.74,9	.73,9	.70	.65,1	.66,9	.64,6	.66	.69
	Fuchau tael	.70,9	.70	.66,3	.61,6	.63,4	.61,2	.62,5	.65,3
	Haikwan tael	.78	.77	.73,1	.67,8	.69,7	.67,3	.68,8	.71,8
	Hankau tael	.71,7	.70,8	.67,1	.62,3	.64,1	.61,9	.63,2	.66
	Ningpo tael	.73,7	.72,8	.68,9	.64	.64,3	.63	.65	.67,9
	Niuchwang tael	.71,9	.71	.67,2	.62,5	.65,9	.62	.63,4	.66,2
	Shanghai tael	.70	.69,1	.65,5	.60,8	.62,6	.60,4	.61,7	.64,5
	Swatow tael	.70,8	.69,9	.66,2	.61,5	.63,3	.61,1	.62,4	.65,2
	Takao tael	.77,2	.76,2	.72,2	.67	.66	.66,6	.68	.71
	Tientsin tael	.74,8	.73,4	.69,5	.64,6	.66,4	.64,1	.65,5	.68 4
Colombia	Silver peso	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Ecuador	do	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
India[1]	Silver rupee	.22,5	.22,2	.21,1	.19,6	.20,1	.19,1	.19,9	.20,7
Japan	Silver yen	.51,1	.50,5	....	....	....	....	....	....
Mexico	Silver dollar	.51,5	.50,8	.48,2	.44,6	.46	.44,4	.45,4	.47,4
Persia	Silver kran	.08,7	.08,6	.08,2	.07,6	.07,8	.07,5	.07,7	.08
Peru	Silver sol	.47,4	.46,8	.44,3	.41,2	.42,4	.40,9	.41,8	.43,6
Russia	Silver ruble	.37,9	.37,4	....	....	....	....	....	....

Countries.	Monetary unit.	1899.				1900.		
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.
Bolivia	Silver boliviano	$0.43,9	$0.43,4	$0.44,3	$0.43,6	$0.42,7	$0.43,6	$0.43,8
Central America	Silver peso	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8
China	Amoy tael	.71	.70,2	.71,6	.70,5	.69,1	.70,5	.70,9
	Canton tael	.70,8	.70	.71,4	.70,3	.68,9	.70,3	.70,7
	Chefoo tael	.67,9	.67,2	.68,4	.67,4	.66,1	.67,4	.67,8
	Chinkiang tael	.69,3	.68,6	.69,9	.68,9	.67,5	.68,8	.69,3
	Fuchau tael	.65,6	.65	.66,2	.65,2	.64	.65,2	.65,6
	Haikwan tael	.72,2	.71,4	.72,8	.71,8	.70,3	.71,7	.72,1
	Hankau tael	.66,4	.65,7	.67	.66	.64,7	.65,9	.66,3
	Ningpo tael	.68,2	.67,5	.68,8	.67,8	.66,5	.67,7	.68,2
	Niuchwang tael	.66,5	.65,9	.67,1	.66,1	.64,8	.66,1	.66,5
	Shanghai tael	.64,8	.64,1	.65,4	.64,4	.63,1	.64,4	.64,8
	Swatow tael	.65,5	.64,9	.66,1	.65,1	.63,9	.65,1	.65,5
	Takao tael	.71,4	.70,7	.72	.71	.69,6	.70,9	.71,4
	Tientsin tael	.68,8	.68	.69,4	.68,3	.67	.68,3	.68,7
Colombia	Silver peso	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8
Ecuador	do	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8
India[1]	Silver rupee	.20,8	.20,6	.21	.20,7	.20,3	.20,7	.20,8
Mexico	Silver dollar	.47,7	.47,2	.48,1	.47,4	.46,4	.47,3	.47,6
Persia	Silver kran	.08,1	.08	.08,2	.08	.07,9	.08	.08,1
Peru	Silver sol	.43,9	.43,4	.44,3	.43,6	.42,7	.43,6	.43,8

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[1] The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in Consular Reports and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal	4.422 gallons.
Ardeb	Egypt	7.6907 bushels.
Are	Metric	0.02471 acre.
Arobe	Paraguay	25 pounds.
Arratel or libra	Portugal	1.011 pounds.
Arroba (dry)	Argentine Republic	25.3175 pounds.
Do	Brazil	32.38 pounds.
Do	Cuba	25.3664 pounds.
Do	Portugal	32.38 pounds.
Do	Spain	25.36 pounds.
Do	Venezuela	25.4024 pounds.
Arroba (liquid)	Cuba, Spain, and Venezuela	4.263 gallons.
Arshine	Russia	28 inches.
Arshine (square)	do	5.44 square feet.
Artel	Morocco	1.12 pounds.
Baril	Argentine Republic and Mexico	20.0787 gallons.
Barrel	Malta (customs)	11.4 gallons.
Do	Spain (raisins)	100 pounds.
Berkovets	Russia	361.12 pounds.
Bongkal	India	832 grains.
Bouw	Sumatra	7,096.5 square meters.
Bu	Japan	0.1 inch.
Butt (wine)	Spain	140 gallons.
Caffiso	Malta	5.4 gallons.
Candy	India (Bombay)	529 pounds.
Do	India (Madras)	500 pounds.
Cantar	Morocco	113 pounds.
Do	Syria (Damascus)	575 pounds.
Do	Turkey	124.7036 pounds.
Cantaro (cantar)	Malta	175 pounds.
Carga	Mexico and Salvador	300 pounds.
Catty	China	1.333⅓ (1⅓) pounds.
Do[1]	Japan	1.31 pounds.
Do	Java, Siam, and Malacca	1.35 pounds.
Do	Sumatra	2.12 pounds.
Centaro	Central America	4.2631 gallons.
Centner	Bremen and Brunswick	117.5 pounds.
Do	Darmstadt	110.24 pounds.
Do	Denmark and Norway	110.11 pounds.
Do	Nuremberg	112.43 pounds.
Do	Prussia	113.44 pounds.
Do	Sweden	93.7 pounds.
Do	Vienna	123.5 pounds.
Do	Zollverein	110.24 pounds.
Do	Double or metric	220.46 pounds.
Chih	China	14 inches.
Coyan	Sarawak	3,098 pounds.
Do	Siam (Koyan)	2,667 pounds.
Cuadra	Argentine Republic	4.2 acres.
Do	Paraguay	78.9 yards.
Do	Paraguay (square)	8.077 square feet.
Do	Uruguay	Nearly 2 acres.
Cubic meter	Metric	35.3 cubic feet.
Cwt. (hundredweight)	British	112 pounds.
Dessiatine	Russia	2.6997 acres.
Do	Spain	1.599 bushels.
Drachma	Greece	Half ounce.
Egyptian weights and measures	(See CONSULAR REPORTS, No. 144.)	
Fanega (dry)	Central America	1.5745 bushels.
Do	Chile	2.575 bushels.
Do	Cuba	1.599 bushels.
Do	Mexico	1.54728 bushels.
Do	Morocco	Strike fanega, 70 lbs.; full fanega, 118 lbs.

[1] More frequently called "kin." Among merchants in the treaty ports it equals 1.33⅓ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Fanega (dry)	Uruguay (double)	7.776 bushels.
Do	Uruguay (single)	3.888 bushels.
Do	Venezuela	1.599 bushels.
Fanega (liquid)	Spain	16 gallons.
Feddan	Egypt	1.03 acres.
Frail (raisins)	Spain	50 pounds.
Frasco	Argentine Republic	2.5096 quarts.
Do	Mexico	2.5 quarts.
Frasila	Zanzibar	35 pounds.
Fuder	Luxemburg	264.17 gallons.
Garnice	Russian Poland	0.88 gallons.
Gram	Metric	15.432 grains.
Hectare	do	2.471 acres.
Hectoliter:		
Dry	do	2.838 bushels.
Liquid	do	26.417 gallons.
Joch	Austria-Hungary	1.422 acres.
Ken	Japan	6 feet.
Kilogram (kilo)	Metric	2.2046 pounds.
Kilometer	do	0.621376 mile.
Klafter	Russia	216 cubic feet.
Koku	Japan	4.9629 bushels.
Korree	Russia	3.5 bushels.
Kwan	Japan	8.28 pounds.
Last	Belgium and Holland	85.134 bushels.
Do	England (dry malt)	82.52 bushels.
Do	Germany	2 metric tons (4,480 pounds).
Do	Prussia	112.29 bushels.
Do	Russian Poland	11¼ bushels.
Do	Spain (salt)	4,760 pounds.
League (land)	Paraguay	4,633 acres.
Li	China	2,115 feet.
Libra (pound)	Castilian	7,100 grains (troy).
Do	Argentine Republic	1.0127 pounds.
Do	Central America	1.043 pounds.
Do	Chile	1.014 pounds.
Do	Cuba	1.0161 pounds.
Do	Mexico	1.01465 pounds.
Do	Peru	1.0143 pounds.
Do	Portugal	1.011 pounds.
Do	Uruguay	1.0143 pounds.
Do	Venezuela	1.0161 pounds.
Liter	Metric	1.0567 quarts.
Livre (pound	Greece	1.1 pounds.
Do	Guiana	1.0791 pounds.
Load	England (timber)	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 superficial feet.
Manzana	Costa Rica	1¾ acres.
Do	Nicaragua and Salvador	1.727 acres.
Marc	Bolivia	0.507 pound.
Maund	India	82 2/7 pounds.
Meter	Metric	39.37 inches.
Mil	Denmark	4.68 miles.
Do	Denmark (geographical)	4,61 miles.
Milla	Nicaragua and Honduras	1.1493 miles.
Morgen	Prussia	0.63 acre.
Okl	Egypt	2.7225 pounds.
Do	Greece	2.84 pounds.
Do	Hungary	3.0817 pounds.
Do	Turkey	2.85418 pounds.
Do	Hungary and Wallachia	2.5 pints.
Pic	Egypt	21¼ inches.
Picul	Borneo and Celebes	135.64 pounds.
Do	China, Japan, and Sumatra	133⅓ pounds.
Do	Java	135.1 pounds.
Do	Philippine Islands (hemp)	139.45 pounds.
Do	Philippine Islands (sugar)	140 pounds.
Pie	Argentine Republic	0.9478 foot.
Do	Castile	0.91407 foot.
Pik	Turkey	27.9 inches.
Pood	Russia	36.112 pounds.
Pund (pound)	Denmark and Sweden	1.102 pounds.
Quarter	Great Britain	8.252 bushels.
Do	London (coal)	36 bushels.
Quintal	Argentine Republic	101.42 pounds.
Do	Brazil	130.06 pounds.
Do	Castile, Chile, Mexico, and Peru	101.61 pounds.
Do	Greece	123.2 pounds.
Do	Newfoundland (fish)	112 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Quintal	Paraguay	100 pounds.
Do	Syria	125 pounds.
Do	Metric	220.46 pounds.
Rottle	Palestine	6 pounds.
Do	Syria	5¾ pounds.
Sagen	Russia	7 feet.
Salm	Malta	490 pounds.
Se	Japan	0.02451 acres.
Seer	India	1 pound 13 ounces.
Shaku	Japan	11.9305 inches.
Sho	do	1.6 quarts.
Standard (St. Petersburg)	Lumber measure	165 cubic feet.
Stone	British	14 pounds.
Suerte	Uruguay	2,700 cuadras (see cuadra).
Sun	Japan	1.193 inches.
Tael	Cochin China	590.75 grains (troy).
Tan	Japan	0.25 acre.
To	do	2 pecks.
Ton	Space measure	40 cubic feet.
Tonde (cereals)	Denmark	3.94783 bushels.
Tondeland	do	1.36 acres.
Tsubo	Japan	6 feet square.
Tsun	China	1.41 inches.
Tunna	Sweden	4.5 bushels.
Tunnland	do	1.22 acres.
Vara	Argentine Republic	34.1208 inches.
Do	Castile	0.914117 yard.
Do	Central America	32.87 inches.
Do	Chile and Peru	33.367 inches.
Do	Cuba	33.384 inches.
Do	Curaçao	33.375 inches.
Do	Mexico	33 inches.
Do	Paraguay	34 inches.
Do	Venezuela	33.384 inches.
Vedro	Russia	2.707 gallons.
Vergees	Isle of Jersey	71.1 square rods.
Verst	Russia	0.663 mile.
Vlocka	Russian Poland	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights:

- Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
- Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
- Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
- Gram equals 15.432 grains.
- Decagram (10 grams) equals 0.3527 ounce.
- Hectogram (100 grams) equals 3.5274 ounces.
- Kilogram (1,000 grams) equals 2.2046 pounds.
- Myriagram (10,000 grams) equals 22.046 pounds.
- Quintal (100,000 grams) equals 220.46 pounds.
- Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures:

- Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
- Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
- Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
- Liter equals 0.908 quart.
- Decaliter (10 liters) equals 9.08 quarts.
- Hectoliter (100 liters) equals 2.838 bushels.
- Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures:

- Milliliter ($\frac{1}{1000}$ liter) equals 0.0338 fluid ounce.
- Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
- Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
- Liter equals 1.0567 quarts.
- Decaliter (10 liters) equals 2.6418 gallons.
- Hectoliter (100 liters) equals 26.417 gallons.
- Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length:
- Millimeter (1/1000 meter) equals 0.0394 inch.
- Centimeter (1/100 meter) equals 0.3937 inch.
- Decimeter (1/10 meter) equals 3.937 inches.
- Meter equals 39.37 inches.
- Decameter (10 meters) equals 393.7 inches.
- Hectometer (100 meters) equals 328 feet 1 inch.
- Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
- Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures:
- Centare (1 square meter) equals 1,550 square inches.
- Are (100 square meters) equals 119.6 square yards.
- Hectare (10,000 square meters) equals 2.471 acres.

FOREIGN MARKETS FOR AMERICAN COAL.

DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,
Washington, March 10, 1900.

To the Consular Officers of the United States.

GENTLEMEN: The Department has recently received a number of voluntary reports from consular officers at different points in Europe upon the scarcity of coal suitable for manufacturing and steamship purposes, and they call attention to the fact that an opportunity offers for the increased exportation from the United States not only of bituminous, but also of anthracite coal. Certain grades of our steam coal have been found to compare very favorably with similar coals imported from Great Britain or from mining regions on the continent of Europe. During the calendar year 1899 the export of American coal increased by more than 3,000,000 tons over that of the previous year, and there would seem to be exceptionally favorable conditions—which should be promptly availed of—to largely increase the consumption in foreign markets. You are therefore directed to report, with as little delay as possible, upon the demand in your district for imported coal, the total consumption of coal, the kinds and qualities which are especially needed, the prices they command, and the sources from which the present coal supply is obtained. If American coal is already being used, please indicate to what extent the origin and character of the coal, and whether it is satisfactorily supplying the place of coals previously used. Should there be coal mines in your district which supply the local demand, please state the fact; also, whether coal is exported and to what extent, and the causes and probable duration of scarcity of supply, if such scarcity exists.

It is important, if objections exist to American coals, that the reasons be stated; also, what tariff or other restrictions upon importations are imposed, and the character of transportation facilities from points in this country, foreign rates, etc. Should you be unable to make a comprehensive report immediately, you will forward to the Department such information as you may be able to obtain which would be of value to our coal interests.

The reports should be transmitted directly to the Bureau of Foreign Commerce, in order that no time be lost in printing them in the daily Consular Reports, so that they may be placed at the disposal of exporters with the least delay.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,
Third Assistant Secretary.

EUROPE.

AUSTRIA.

GENERAL REPORT.

There is a large demand for coal at present in Austria-Hungary, owing to the scarcity resulting from the recent great strikes in the mines; and this scarcity is likely to continue through the summer. Though the strikes are at an end now, it will take some time before the mines are in regular working order and the output reaches the usual figure of some 9,000 carloads per day. A carload consists of 10,000 kilograms, or about 10 long tons. The coal mined in Austria is principally lignite or brown coal, and so-called "Steinkohle," a black, bituminous coal. Anthracite occurs scarcely at all. The kind of coal most in demand goes by the name of "Förderkohle," is a black, bituminous coal, and consists of a mixture of large and small lumps, used almost altogether by manufacturers. The wholesale prices for the various qualities are as high at present as from 52 to 59 cents for 220 pounds, or $5.20 to $5.90 a ton. The normal wholesale rate ranges from 22 to 25 cents for 220 pounds, or $2.20 to $2.50 a ton. At present, the source of supply is anywhere the coal may be had cheapest. Usually, it is the mines of this Monarchy that furnish in large measure the supply requisite for the local demand. In fact, the production of these mines would largely cover domestic needs were it not for the high rates of inland freight, which lead manufacturers in frontier regions to import coal at lower rates from the adjacent countries, mainly Germany, Russia, and Servia. The cost of transportation, for instance, from Prussia to the Austrian border is from $2.50 to $4 a carload. It is the high rate of freight in the interior, which forms the only obstacle to importation from America. It might pay to export to coast cities, such as Trieste and Fiume, and also a short distance inland, but the prevailing restrictive freights will effectually block the entrance of American coal into towns at any appreciable distance from the seaboard. Up to the present no American coal has been used in Austria, but there certainly is no objection to it save the one of excessive freight. There are no restrictions imposed on the importation of coal from any country—it enters Austria duty free.

The following are tables showing the import and export of coal into and from Austria-Hungary during the five years ended 1898, and for the six months ended June, 1899:

Import.

LIGNITE OR BROWN COAL.

Principal countries and years.	Quantity, in long tons.	Price per ton.	Total value.
German Empire	16,318.6	$2.16	$35,237.20
Roumania	15	2.16	32.40
Russia	12.5	2.16	27.20
Servia	2,821.5	2.40	5,571.60
Switzerland	38.1	2.16	82.40
Total in 1898	18,700.7	....	40,950.80
1897	19,608.8	....	43,088.00
1896	19,981.2	....	43,159.20
1895	16,796.7	....	36,280.80
1894	17,453.2	....	37,698.80
1899 (first half)	9,318.7	2.20	21,501.00

BLACK BITUMINOUS COAL.

Belgium	106	$2.52	$267.20
France	10	2.52	25.20
German Empire	5,193,785.6	2.44	12,672,836.80
Great Britain	148,339.2	4.92	729,828.80
Italy	1,089.1	2.52	2,744.40
Netherlands	30	2.52	75.60
Roumania	1,715.6	2.52	4,323.20
Russia	49,647.7	2.50	129,084.00
Servia	560.3	2.52	1,412.00
Switzerland	242.2	2.52	610.40
Trieste (free zone)	621.9	2.52	1,567.20
Turkey	610	2.52	1,537.20
Total in 1898	5,396,757.6	....	13,544,312.00
1897	5,121,474.8	....	12,552,886.80
1896	5,174,321	....	12,556,255.60
1895	4,503,002.6	....	11,116,193.60
1894	4,048,477	....	10,454,348.40
1899 (first half)	2,493,806.9	2.44	6,405,408.00

COKE (NOT FROM GAS WORKS).

German Empire	567,584.5	$4.60	$2,610,888.80
Great Britain	37,570.2	6.88	258,482.80
Italy	99.7	4.28	426.80
Roumania	673	4.28	2,880.40
Switzerland	834.9	4.28	3,573.20
Trieste (free zone)	20.8	4.28	89.20
Total in 1898	606,783.1	....	2,876,341.20
1897	533,462.6	....	2,279,648.40
1896	491,028.4	....	2,044,014.00
1895	533,402.1	....	2,242,114.80
1894	437,299.2	....	1,755,643.60
1899 (first half)	262,766.1	4.60	1,245,926.40

Export.

LIGNITE OR BROWN COAL.

Principal countries and years.	Quantity, in long tons.	Price per ton.	Total value.
Bulgaria	533	$3.60	$1,918.80
German Empire	8,321,935.2	1.40	11,650,709.20
Hamburg (free zone)	933.1	3.60	3,359.20
Italy	22,046	3.28	72,310.80
Roumania	215.3	3.60	775.20
Servia	3,957.2	3.60	14,246
Switzerland	2,344.8	2.48	5,790.40
Total in 1898	8,351,954.6	....	11,749,109.60
1897	8,108,974.9	....	10,742,872.40
1896	7,562,720.7	....	9,728,324.80
1895	7,143,233.9	....	9,560,963.60
1894	6,902,493.5	....	9,364,830.40
1899 (first half)	4,226,552.9	1.40	6,115,016.00

BLACK BITUMINOUS COAL.

Belgium	17.2	$4.00	$68.80
Bulgaria	932.8	4.00	3,731.20
German Empire	578,982.8	2.84	1,644,811.20
Great Britain	190	4.00	760.00
Greece	170	4.00	680.00
Italy	58,520.3	4.12	241,103.60
Montenegro	100	4.00	400.00
Roumania	112,265.9	4.20	471,516.80
Russia	26,300.2	3.56	93,628.80
Servia	21,877	4.40	96,258.80
Switzerland	4,710.4	5.92	27,885.60
Trieste (free zone)	20,663.6	5.20	107,450.80
Total in 1898	824,730.2	....	2,687,795.60
1897	701,918.8	....	2,133,250.80
1896	658,367.6	....	2,000,696.80
1895	640,962.6	....	1,953,535.60
1894	629,669.9	....	1,937,560.40
1899 (first half)	394,286.2	3.24	1,269,839.60

COKE (NOT FROM GAS WORKS).

Bulgaria	80.4	$5.60	$450.40
German Empire	33,858.5	4.28	144,914.40
Great Britain	20	5.60	112.00
Italy	2,236.4	6.40	14,312.80
Roumania	2,346.1	6.20	14,546.00
Russia	155,230.4	5.92	918,964.00
Servia	516.2	5.00	2,581.00
Switzerland	.7	5.60	4.00
Total in 1898	194,288.7	....	1,095,884.60
1897	145,055.7	....	790,594.40
1896	116,607.6	....	620,006.40
1895	119,050.5	....	645,262.00
1894	110,459.5	....	601,827.60
1899 (first half)	118,288	5.52	680,634.00

The coal mines nearest Vienna are in the province of Moravia. So far as brown coal is concerned, there is sufficient to supply the local demand, but the black bituminous coal used here is chiefly of German origin. Coke—not the kind coming from gas works, but a variety made from coal dust—is an excellent fuel, diffusing great heat, and used for smelting. It also serves as fuel for certain stoves manufactured specially for its use. This kind of coke is more expensive than coal, the ordinary price being 57 cents for 220 pounds, or $5.70 a ton wholesale. At present coke commands, at retail, 92 cents for 220 pounds, or $9.20 a ton, and black bituminous coal, run of the mine, costs 64 cents for 220 pounds, or $6.40 a ton. Gas coke is sold, retail, in Vienna at about $6 a ton.

The recent strikes had for their object increase in wages and decrease in time of labor. The miners asked for an eight-hours-a-day regulation. Experts claim that this innovation is impracticable here at the current rate of wages, owing to the fact that the coal lies at such a great distance from the surface that too much time is required to bring the miner to his work. The result of the strikes has been merely a nominal increase in pay.

CARL BAILEY HURST,
Consul-General.

VIENNA, *April 10, 1900.*

REICHENBERG.

There is no opening for the introduction of American coal into this consular district, unless the price can be made lower than that of the local product. In the western part of the district are extensive mines, which not only supply local demands, but also export to Germany. Indeed, Saxony is largely dependent upon these mines for its fuel supply. To the east of this district, in German Silesia, are also mines, which furnish most of the coal used in this city, on account of their nearness and the resulting low transportation rates. No coal is imported into the district except from these mines.

During the past winter a strike in the coal mines here greatly reduced the supply and increased prices. Though the strike has ended, the effect is still felt. This, together with the increased price of English and continental coal, is directing attention to American coal. A local newspaper publishes a lengthy article on the shipment of American coal to Europe, showing that it is being delivered at French ports 60 cents cheaper per ton than the lowest price for English coal. The publishing of such facts tends to pave the way for the introduction of American coal, but everything depends upon the price at which it can be laid down here.

Reichenberg and suburbs consume annually 12,000 carloads of coal; the entire consular district, from 350,000 to 400,000 carloads. (A carload is between 20,000 and 25,000 pounds.) The kinds and qualities most in use are steinkohle (stone coal), which is substantially a mean between the American anthracite and bituminous coal—softer than the former and harder than the latter; and braunkohle (brown coal), a soft, woody article, resembling a rather low grade of American bituminous coal. Stone coal is used in stores and offices and in the dwellings of well-to-do people, and brown coal by people of small means. In factories, however, the two kinds are mixed together and used as fuel.

The price of stone coal is 134 to 142 crowns ($27.20 to $28.83) per 10,000 kilograms (22,046 pounds) at the mine; of brown coal, 68 to 106 crowns ($13.80 to $21.52) per 10,000 kilograms at the mine. The freight rate on the brown coal to Reichenberg averages 60 crowns ($12.18) per 10,000 kilograms, and on stone coal, 85 crowns ($17.25) per 10,000 kilograms, which is practically equivalent to a carload. These figures make the price of stone coal about $4 a ton, and of brown coal about $2.50 a ton in Reichenberg, in carload quantities.

There is at present no duty on coal imported into Austria-Hungary.

The freight rates on coal to Reichenberg by rail are 1.74 crowns (35 cents) per 100 kilograms (220.46 pounds) from Bremen, and 1.59 crowns (32 cents) from Hamburg. By the Elbe River from Hamburg the rate is about 1.20 crowns (24 cents) per 100 kilograms.

FRANK W. MAHIN, *Consul.*

REICHENBERG, *May 1, 1900.*

BELGIUM.

GENERAL REPORT.

For some months, a certain scarcity of coal has existed in the markets of this country and the price has consequently increased. As far as this city is concerned, the scarcity arose some months ago because of an interruption in the delivery of freight from the mining districts, due to a lack of the necessary number of wagons, together with the conditions of weather which prevented the regular running of trains. At that time my attention was directed to the fact, and on learning from an enterprising merchant (also a leading shipowner) of this place that he had recently closed a number of contracts for English coal, the inquiry was made by me why he had not considered the advisability of forming a connection in our country. His reply was that ocean rates of freight were such as to render such an operation unprofitable. As there is no person here who is better posted than he in all matters of a business character, and no one more eager to enter upon any profitable speculation, it seemed to me useless to pursue the inquiry any further and consequently the matter was not reported to the Department.

There exists, however, not only in Belgium, but throughout the Continent, as well as in England, a largely increased demand and a consequent increase of prices. This is to be attributed, in my opinion, in the first place, to the growing demand for coal for manufacturing purposes generally. Recently a prominent capitalist, interested in the management of a new company, formed for the purpose of constructing an electric tramway service in this city, told me that it would be impossible for the company to obtain the necessary rails anywhere in Europe or America within the next two years. This fact is cited simply as evidence of the activity in one branch of industry. Reference is often made to the present conditions existing in Russia, where such an impulse has been recently given to manufacturing industries.

Another reason for the increase of price is unquestionably to be found in the decrease of production, owing to an augmentation of wages paid the miners. Further, in the opinion of many people, the demand occasioned by transportation service for South Africa, due to the existing war, is also a factor to be taken into consideration.

It can be reasonably assumed that no one of the causes of the increase in price before mentioned will rapidly disappear, and it seems certain that the market will remain in about the present condition for some time, at least.

It is certainly a favorable moment for our interests to consider the practicability of extending their foreign market. That this can be done, no doubt whatever exists in my mind, provided that the necessary trouble in studying existing conditions and making adequate preparations be taken.

If a good quality of coal can be procured in our country at the price of $1.18 at the pit, as against the same quality in England at $1.36 at the pit, the question of obtaining the market evidently depends largely upon the cost of transportation.

It does not seem to me, however, that it would be possible to export coal by the regular steamship lines alone.

As I understand it, rates of freight charged would depend upon the ruling prices for grain. For instance, with grain at 4¼, coal would not be carried for less than from 16 to 19 shillings ($3.88–$4.61) per ton. With grain at 2½, the freight would amount to between 11 and 14 shillings. ($2.67–$3.40.) The above refers, of course, to rates to this port.

One point of great importance should be brought to the attention of anyone contemplating the exportation of coal, to wit: That to insure any degree of success, a regular delivery of the quality demanded is necessary. There are, in my judgment, many manufacturing establishments that would be very glad to enter upon regular engagements with reliable dealers, in order to be furnished regularly with the same quality at a price agreed upon.

It will be readily understood by any manufacturer in our country that to those accustomed to use a quality of coal which furnishes exactly what is needed, any change is unwelcome. This observation is made for the reason that much of the so-called "fine" coal imported from mines in the same district of Newcastle yields very different results, and dealers here have had much trouble with their customers because of this variation of quality.

There are certain qualities which, in the opinion of those in a position to know, could be imported from our country to advantage, provided, of course, that transportation rates could be arranged.

In the first place, coal for the manufacture of coke, it is believed, would find a good market here. It is already imported into this country from Cardiff to some extent, the consumption amounting to from 200,000 to 250,000 tons a year. The variety is termed in French "Fines coke" or "Coking small," furnishing from 10 to 12 per cent of ashes and from 24 to 26 per cent of volatile matter, rendering from 65 to 70 per cent of coke.

Another quality of coal which would find a current market is known under the name of "Fines industrielles" or "small steam," employed, of course, for the generation of steam in boiler furnaces. This small coal furnishes also from 10 to 12 per cent of ashes, with from 25 to 30 per cent of volatile matter. This quality should be able to vaporize 17 to 19 pounds of water per 2.2046 pounds of coal. This style corresponds to the coal produced here in the Charleroi district, called the "half bituminous," which sells at the rate of $4.05 on the wagon at the mines.

Lastly, there is a third quality known under the name of "Tout venant," or "half bituminous," used likewise for steam purposes as well as for house grates, etc. This coal is of strong composition, in large pieces varying from 40 to 70 per cent, with 30 to 60 per cent of small. This is similar to the English "unscreened," which vaporizes according to conditions from 15 to 19 pounds of water per 2.2046 pounds of coal employed.

As to coke, it is hardly probable that the exportation of the same could be found profitable, considering the cost of transportation.

There is, however, another article important for industrial and navigation purposes coming rapidly into quite general use. Reference is here made to "briquettes" or "patent fuel," of which one firm in Antwerp sold 115,000 tons last year.

It has been noticed by me that the powerful locomotives lately constructed for the Belgian State Railway in England consume only this style of fuel, the large briquettes without holes. The idea suggests itself if it would not be in the interest of our railroad companies to adopt also this style of fuel, thereby avoiding, or rather making use of, the quantity of dust which arises on breaking up and handling the soft coal generally employed. The particulars as to the manufacture of the same will be readily furnished by the firm hereinafter mentioned.

There is no import duty on coal in Belgium.

As for transportation facilities, the Red Star Line, as is well known, runs steamers both from New York and Philadelphia to this port, the

Puritan Line runs from Boston and Baltimore, and the Phœnix Line from New York and Newport News (Va).

Should any American company desire to consider seriously the expediency of opening up relations with this country, it can do no better than to address the firm of Perrignon & Co., of this city, which will be able to furnish them the most accurate information as to the existing demands, as well as to the conditions necessary to transact the business on a favorable basis.

GEO. F. LINCOLN, *Consul-General.*

ANTWERP, *April 25, 1900.*

SUPPLEMENTAL.

Inasmuch as the coal industry is one of the most important as well as prosperous of any existing in this country, it seemed to me well to supplement the report lately called for by the Department by furnishing to any contemplating the exportation of our product an idea of the present conditions here.

The coal basin of Belgium runs through the three provinces of Liege, Namur, and Hainaut, which cover about one-third of the total superficial area of the Kingdom.

The surface of territory granted for coal-mining purposes covers 341,442 acres, which are to-day worked by 113 mining companies. Forty-two mines exist which have been at one time worked, but in which operations are temporarily suspended, and there exist, further, 51 coal deposits which have never been developed.

The Belgian coal is stated by experts to be wholly bituminous, and the true anthracite as understood by us is said not to exist here. It is true that coal is sold in the market here as of Belgian origin under the name of "anthracite," but, as before stated, in the opinion of those able to judge, it is in reality a "charbon maigre," or lean coal.

According to official statistics, the total number of workmen employed in or about the coal mines for the year 1899, including those working below the surface as well as above, was 124,000. The average number of workdays was three hundred and two, of from ten to twelve hours.

The average wages paid were as follows: Miners, 79 cents; workmen at the surface, 50 cents; women and young girls working in the mines, 46 cents; boys from 14 to 15 years, 42 cents; children from 12 to 14 years, 29 cents.

The table which follows furnishes a complete list of the Belgian coal mines in operation to-day, and shows the character of the coal produced and the production of each mine during the year 1899.

Name of mine and locality.	Name of company.	Headquarters.	Name of director.	Residence.	Output in 1899. Tons.	Nature of coal.
Blaton, Bernissart	Société Anonyme des Charbonnages de Bernissart.	Bernissart	H. Dumon	Tournai	173,300	Bituminous and semibituminous.
Belle Vue, Elouges, Bois du Boussu, Boussu; Longterne, Dour.	Société Anonyme des Charbonnages unis de l'Ouest de Mons.	Boussu	A. Dupire	Dour	542,550	Do.
Grand Machine à feu de Dour, Dour.	Société Anonyme du Charbonnage de la Grande Machine à feu de Dour.	do	J. Raoult	do	188,020	Long flame semibituminous.
Grande Chevalière et Midi de Dour, Dour.	Société Anonyme des Chevalières de Dour.	do	O. Laurent	do	75,910	Bituminous.
Bois de Saint Ghislain, Dour	Société Anonyme du Charbonnage du bois de St. Ghislain.	do	E. Moreau	Hornu	83,510	Bituminous and semibituminous.
Escouffiaux, Wasmes	Compagnie de Charbonnages Belges.	Frameries	I. Isaac	Frameries	644,700	Semibituminous long flame, and bituminous.
Charbonnages Réunis de l'Agrappe, Frameries.	do	do	do	do	644,700	Do.
Buisson, Wasmes	Société Anonyme des Mines de Houille du Grand Buisson.	Wasmes	P. Plumat	Hornu	263,800	"Flénu" bituminous and long flame semibituminous.
Hornu and Wasmes, Wasmes	Société Anonyme du Charbonnage d'Hornu et Wasmes.	do	G. Deladrière	Wasmes	426,600	"Flénu sec" and "Flénu" bituminous.
Grand Hornu, Hornu	Société Civile des Usines et Mines de Houille du Grand Hornu.	Hornu	F. Rainbeaux	Paris	255,130	"Flénu sec."
Grand Bouillon, Paturages	Société Anonyme des Charbonnages du Borinage Central.	Paturages	A. Dubar	Paturages	118,070	Semibituminous.
Bonne-Veine, Quaregnon	Société Métallurgique de Gorcy, Société Anonyme des Charbonnages du Fief de Lambrechies.	do	A. Dupont	Hornu	84,980	Long flame semibituminous and bituminous.
Rieu du Coeur, Quaregnon	Société Anonyme des Charbonnages du Rieu du Coeur and de la Boule Réunis.	Quaregnon	L. François	Quaregnon	296,700	"Flénu" bituminous and long flame semibituminous.
	Société Anonyme du Charbonnage du Couchant de Flénu.	do	A. Vasseur	do	145,000	Do.
Nord du Rieu du Coeur	Société Anonyme du Charbonnage du Nord du Rieu du Coeur.	do	A. Olivier	do		Do.
Esperance	Société Anonyme du Charbonnage de Badour.	Badour	A. Passelecq	Mons	(1)	
Produits, Flénu	Société Anonyme des Produits.	Flénu	H. Mativa	Flénu	558,000	Long flame bituminous and semibituminous.
Levant du Flénu, Cuesmes	Société Anonyme des Charbonnages du Levant du Flénu.	Cuesmes	A. Leroy	Cuesmes	536,100	"Flénu sec."
Ghlin, Ghlin	Société Anonyme des Charbonnages du Nord du Flénu.	Ghlin	A. Sohier	Ghlin	145,000	Three-fourths bituminous.

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[1] Work has not as yet been commenced.

Name of mine and locality.	Name of company.	Headquarters.	Name of director.	Residence.	Output in 1899.	Nature of coal.
BASSIN DU CENTER.					*Tons.*	
St. Denis, Obourg, Havré, Havré.	Société civile des Charbonnages du Bois du Luc.	Houdeng-Aimeries	O. Degueldre	Houdeng-Aimeries.	202,380	Bituminous and semibituminous.
Maurage, Bray, Boussoit, Maurage.	Société Anonyme des Charbonnages de Bray, Maurage and Boussoit.	Maurage	A. Ledent	Maurage	148,650	Do.
Strépy and Thieu, Strépy	Société Anonyme des Charbonnages Hauts Fournaux et Usines de Strépy-Braquegnies.	Strépy	A. Sottiaux	Strépy	418,760	Bituminous and three-fourths bituminous.
Bois du Luc and Trivières réunis, Houdeng-Aimeries.	Société civile des Charbonnages du Bois du Luc.	Houdeng-Aimeries	O. Degueldre	Houdeng-Aimeries.	394,730	Bituminous and semibituminous.
La Louvière and Sars-Longchamps.	Société Anonyme des Charbonnages de la Louvière and Sars-Longchamps.	La Louvière	A. Soupart	La Louvière	363,190	Bituminous and three-fourths bituminous.
Houssu, Haine-St. Paul	Société Anonyme des Charbonnages de Houssu.	Haine-St. Paul	A. Dehu	Haine-St. Paul	185,700	Bituminous and semibituminous.
Haine St. Pierre and La Hestre, La Hestre.	Société Anonyme des Charbonnages de Haine St. Pierre et La Hestre.	La Hestre	A. Thérasse	La Hestre	133,260	Do.
Mariemont, Olive, Chaud Buisson, and Carnières, Morlanwelz.	Société Anonyme des Charbonnages de Mariemont.	Morlanwelz	L. Guinotte	Morlanwelz	458,440	Good quality semibituminous.
Bascoup, Chapelle lez-Herlaimont.	Société Anonyme des Charbonnages de Bascoup.	Chapelle-lez-Herlaimont.	do	do	634,800	Semibituminous.
Charbonnages réunis de Ressaix, Leval, Péronne, and Ste. Algedonde, Ressaix.	Société Anonyme des Charbonnages de Ressaix, Leval, Péronnes et Ste. Algedonde.	Ressaix	F. Philippart	Ressaix	432,260	Bituminous and semibituminous.
BASSIN DE CHARLEROI.						
Bois de la Haye, Anderlues	Société Anonyme des Houillères d'Anderlues à Anderlues.	Anderlues	A. Ménétrier	Anderlues	370,100	Bituminous and three-fourths bituminous.
Beaulieusart, Fontaine l'Eveque.	Société Anonyme des Charbonnages de Fontaine l'Eveque, à Fontaine l'Eveque.	Fontaine l'Eveque	A. Grosfils	Fontaine l'Eveque.	233,200	Bituminous.
Monceau-Fontaine and Martinet, Monceau sur Sambre.	Société Anonyme des Charbonnages de Monceau, Fontaine et du Martinet.	Monceau sur Sambre.	V. Moreau	Monceau sur Sambre.	545,500	Bituminous; semi- and three-fourths bituminous.
Nord de Charleroi, Courcelles.	Société Anonyme des Charbonnages du Nord de Charleroi.	Roux	E. Turlot	Roux	352,300	Semibituminous and one-fourth bituminous.
Courcelles-Nord, Courcelles	Société Anonyme des Charbonnages de Courcelles Nord.	Courcelles	L. Heuseux	Courcelles	448,800	Semibituminous.
Falnuée and Wartonlieu, Courcelles.	Société Anonyme des Charbonnages de Falnuée.	do	A. Beaumille	do	100,800	Semi- and one-fourth bituminous.

Grand Conty and Spinois	Société Anonyme des Charbonnages de Grand Conty et Spinois.	Gosselies	R. Mostaert	Gosselies	125,600	Lean coal (maigre).
Vallé du Piéton, Jumet	Société Anonyme des Charbonnages du Centre de Jumet.	Roux	A. Mahieu	Jumet	194,100	Do.
Amercœur, Jumet	Société Anonyme des Charbonnages d'Amercœur.	Jumet	F. Gillieaux	do	229,300	Semibituminous and lean coal.
Bayemont and Chauw à Roc, Marchienne.	Société Anonyme des Charbonnages de Bayemont.	Marchienne	T. Tonneau	Marchienne	163,800	Semibituminous.
Sacré Madame, Dampremy	Société Anonyme des Charbonnages de Sacré Madame.	Dampremy	P. Passelecq	Dampremy	292,300	Do.
Marchienne, Marchienne	Société Anonyme des Charbonnages de Marchienne.	Marchienne	J. Labouverie	Marchienne	169,300	Do.
Marcinelle-Nord, Marcinelle	Société Anonyme de Marcinellec et Couillet.	Marcinelle	N. Evrard	Marcinelle	425,500	Bituminous, semi- and three-fourths bituminous.
Forte Taille, Montigny-le-Tilleul.	Société Anonyme Franco-Belge du Charbonnage de Forte-Taille.	Montigny-le-Tilleul	C. Marchand	Montigny le Tilleul.	30,700	Lean coal (maigre).
Masse and Diarbois, Ransart	Société Anonyme des Charbonnages de Masse-Diarbois.	Ransart	A. Bailleux	Ransart	116,650	Very lean or anthracitic
Charleroi, Charleroi	Société Anonyme des Charbonnages Réunis.	Charleroi	A. Soupart	Mont sur Marchienne.	548,000	Semibituminous.
Charbonnages Réunis du Centre de Gilly, Gilly.					234,500	Do.
Appaumée-Ransart, Bois du Roi, and Fontenelle, Ransart.	Société Anonyme des Houillères Unies du Bassin de Charleroi.	Gilly	J. Dufrance	Gilly	294,800	Very lean or anthracitic.
Masse St. François, Faciennes					87,450	One-fourth bituminous.
Bonne-Espérance, Montigny sur Sambre.	Société Anonyme du Charbonnage de l'Epine.	Montigny sur Sambre.	M. Gérard	Montigny sur Sambre.	29,600	Semibituminous.
Grand Mambourg Sablonnière, Liège, Montigny sur Sambre.	Société Anonyme des Charbonnages du Grand-Mambourg Sablonnière.	do	E. Fréson	Charleroi	182,500	Do.
Poirier, Montigny sur Sambre.	Société Anonyme des Charbonnages du Poirier.	do	A. Navez	Montigny sur Sambre.	161,400	Do.
Noël, Gilly	Société Anonyme des Charbonnages de Nöël-Sart-Culpart.	Gilly	F. Stoesser	Gilly	152,800	One-fourth bituminous.
Trieu Kaisin, Chatelineau	Société Anonyme des Charbonnages de Trieu Kaisin.	Chatelineau	J. Bierneaux	Chatelineau	425,600	Semibituminous.
Boubier, Chatelet	Société Anonyme des Charbonnages du Boubier.	Chatelet	F. Roland	Chatelet	172,000	Do.
Nord de Gilly	Société Anonyme des Charbonnages du Nord de Gilly.	Fleurus	N. Rousseau	Gilly	89,550	One-fourth bituminous.
Bois Communal de Fleurus, Fleurus.	Société Anonyme des Charbonnages du Bois Communal.	Fleurus	M. Gérard	Montigny sur Sambre.	102,450	Do.
Gouffre, Chatelineau	Société Anonyme des Charbonnages du Gouffre.	Chatelineau	G. Desenfans	Chatelineau	318,550	Do.
Carabinier Pont de Loup, Pont de Loup.	Société Anonyme du Charbonnage du Carabinier.	Pont de Loup	E. Lupant	Pont de Loup	166,500	Semibituminous.
Ormont, Chatelet	Société Anonyme du Charbonnage d'Ormont.	Chatelet	L. Roisin	Chatelet	109,600	Do.

Name of mine and locality.	Name of company.	Headquarters.	Name of director.	Residence.	Output in 1899.	Nature of coal.
BASSIN DE CHARLEROI—cont'd.						
					Tons.	
Roton, Ste. Catherine, Farciennes.	Société Anonyme des Charbonnages Réunis de Roton, Farciennes, Baulet et Oignies Aiseau.	Tamines	V. Lambiotte	Tamines	202,700	One-fourth bituminous.
Aiseau Oignies, Aiseau	do	do	do	do	208,700	Lean coal.
Petit Try, Trois Sillon Ste. Marie, Défoncement et Petit Houilleur réunis, Lambusart.	Société Charbonnière du Petit Try, Trois Sillons, Ste. Marie, et Défoncement Réunis.	Lambusart	F. Leborgne	Lambusart	117,500	One-fourth bituminous and lean.
Bonne Espérance, Lambusart	Société Anonyme des Charbonnages de Bonne Espérance.	do	A. Pierard	do	88,400	One-fourth bituminous.
Tergnée, Aiseau, Presles, Farciennes.	Société Anonyme du Charbonnage d'Aiseau-Presles.	Farciennes	J. Henin	Farciennes	144,200	Lean coal.
BASSIN DE NAMUR.						
Tamines, Tamines	Société Anonyme des Charbonnages de Tamines,	Tamines	M. Liesens	Tamines	126,980	Very lean anthacitic.
Auvelais, St. Roche, Auvelais	Société Anonyme des Charbonnages de St. Roche Auvelais.	Auvelais	J. Miaux	Auvelais	78,820	Lean coal.
Falisolle, Falisolle	Société Anonyme du Charbonnage de Falisolle.	Falisolle	E. Herpin	Falisolle	125,700	Lean and one-fourth bituminous.
Arsimont, Auvelais	Société Anonyme du Charbonnage d'Arsimont.	Auvelais	F. Steenman	Auvelais	119,080	Do.
Ham sur Sambre	Société Anonyme des Charbonnages de Ham sur Sambre et Moustier.	Ham sur Sambre	E. Froment	Moustier sur Sambre.	178,900	Do.
Le Chateau, Namur	Société Anonyme du Charbonnage du Chateau.	Namur	A. Servotte	Namur	2,740	Lean coal.
Basse Marlagne, Namur	Société Civile du Charbonnage de Basse-Marlagne.	do	G. Descurieux	do	1,650	Do.
Stud-Rouvroy, Andenne	Société Civile du Charbonnage de Stud-Rouvroy.	Andenne	J. Mathieu	Andenne	2,640	Earth coal.
Groynne, Andenne	Société Anonyme du Charbonnage de Groynne.	do	J. Drally	Ohey	3,800	Do.
Andenelle, Andenne	Société Civile des Charbonnages Liégois.	do	A. Lambotte	Andenne	160	Do.
Malonne, Malonne	Société Anonyme des Charbonnages de Malonne et Floreffe.	Namur	A. Servotte.	Namur.	890	Lean coal
BASSIN DE LIEGE.						
Bois de Gives, and St. Paul, Ben-Ahin.	Société Anonyme des Charbonnages de Gives et St. Paul.	Ben-Ahin	A. DeBarsy	Andenne	36,200	Earth coal.
Halbosart, Villers le Bouillet	Famille Farcy	Villers le Bouillet	E. Fortamps	Villers le Bouillet.	1,630	Lean coal.
Arbre St. Michel, Horion-Hozement.	Société Anonyme des Charbonnages de l'arbre St. Michel.	Horion-Hozément	do	do	(1)	Do.

Nouvelle Montagne, Engis	Société Anonyme de la Nouvelle Montagne.	Engis	F. Cindorff	Liege	57,800	Three-fourths bituminous.
Marihaye, Flemalle-Grande	Société Anonyme des Charbonnages de Marihaye.	Flémalle Grande	M. Dubois	Flémalle Grande.	448,520	Bituminous.
Kessales-Artistes, Jemeppe	Société Anonyme des Charbonnages des Kessales.	Jemeppe	V. Leduc	Jemeppe	385,400	Do.
Concorde, Jemeppe	Société Anonyme des Charbonnages Réunis de la Concorde.	do	E. Kelecom	Liége	151,750	Semibituminous.
Sarts-au-Berleur, Grace-Berleur.	Société Anonyme du Charbonnage du Corbeau-au-Berleur.	Grace-Berleur	L. Frankgnoul	Grace-Berleur	64,870	Do.
Bonneir, Grace-Berleur	Société Anonyme du Charbonnage du Bonneir.	do	L. Burlet	do	32,780	One-fourth bituminous.
Gosson-Lagasse, Montegnée	Société Anonyme des Charbonnages de Gosson Lagasse.	Jemeppe	E. Discry	Jemeppe	311,500	Bituminous, semi and one-fourth bituminous.
Horloz, Tilleur	Société Anonyme des Charbonnages du Horloz.	Tilleur	P. Banneux	Tilleur	409,990	Bituminous and three-fourths bituminous.
Espérance et Bonne-Fortune Montegnée.	Société Anonyme des Charbonnages du meme nom.	Montegnée	P. Habets	Liége	325,290	One-fourth, semi- and three-fourths bituminous.
Ans and Glain, Ans	Société Anonyme des Mines de Houille d'Ans.	Ans	S. Gouverneur	Ans	65,410	Lean anthracitic.
Patience-Beaujonc, Glain	Société Anonyme des Charbonnages de Patience-Beaujonc.	Glain	F. Durieu	Liége	324,350	Semibituminous.
La Haye, Liege	Société Anonyme des Charbonnages de la Haye.	Liége	J. Boulanger	do	372,950	Bituminous and semibituminous.
Selessin-Val Benoit, Ougrée	Société Anonyme des Charbonnages du bois d'Avroy.	Ougrée	C. Petit	Ougrée	317,380	Do.
Bonne Fin-Bâneux, Liége	Société Anonyme des Charbonnages de Bonne Fin.	Liége	F. Souheur	Liége	279,700	One-fourth, semi- and three-fourths bituminous.
Batterie, Liege	Société Anonyme de Bonne Espérance et Batterie.				179,100	One-fourth- and semibituminous.
Espérance, Herstal					104,580	Lean and lean anthracitic.
Abhooz and Bonne Foi-Hareng, Herstal.	Société Anonyme des Charbonnages d'Abhooz et Bonne-Foi-Hareng.	Herstal	E. Kelecom	Liége	141,910	Lean.
Petite-Bacnure, Herstal	Société Anonyme des Charbonnages de la Petite-Bacnure.	do	A. Bernar	do	49,790	Lean and lean anthracitic.
Grande Bacnure, Liége	Société Anonyme de la Grande Bacnure.	Liége	C. Demany	Liége	111,300	One-fourth and semibituminous.
Angleur, Angleur	Société Anonyme des Charbonnages d'Angleur.	Angleur	J. Fréson	do	59,650	Semibituminous.
Belle Vue and Bien Venue, Herstal.	Société Anonyme des Charbonnages de Belle-Vue et Bien Venue.	Herstal	C. Brouhon	Herstal	34,200	One-fourth bituminous.
Bicquet-Gorée Oupeye	Société Anonyme des Charbonnages d'Oupeye.	Oupeye	N. Hallet	Hermalle	24,000	Anthracitic.
Cockrill, Seraing	Société Anonyme John Cockrill.	Seraing	A. Grenier	Seraing	257,720	Bituminous and three-fourths bituminous.
Six-Bonniers, Seraing	Société Charbonnière des Six Bonniers.	do	B. Souheur	do	116,310	Bituminous.
Ougrée, Ougrée	Société Anonyme d'Ougrée	Ougrée	G. Trazenster	Ougrée	105,660	Bituminous and three-fourths bituminous.

[1] Work not as yet commenced.

					in 1899.	
BASSIN DE LIEGE—continued.						
					Tons.	
Trou-Souris, Houlleux-Homvent, Beyne-Heusay.	Charbonnages Réunis de l'est de Liége.	Beyne-Heusay	E. Desvachez	Liége	92,850	Semi- and one-fourth bituminous.
Steppes, Vaux sous Chèvremont.	Société Civile du canal de Fond Piquette.	Vaux sous Chèvremont.	A. Hallet	Vaux sous Chèvremont.	76,330	Semibituminous.
Cowette-Ruffin, Beyne-Heusay	Société Civile de Cowette Ruffin, Grand Henri.	Beyne-Heusay	T. Delsemme	Beyne-Heusay	44,470	Long-flame semibituminous.
Wérister, Beyne-Heusay	Société Anonyme de Wérister	Romsée	J. Dupont	Fléron	118,150	Semibituminous.
Quatre Jean, Queue du Bois	Société Anonyme des Quatre Jean.	Queue du Bois	M. Ledent	Queue du Bois	76,650	Do.
Lonette, Retinne	Société Anonyme de Lonette	Retinne	L. Laguesse	Beyne-Huesay	54,250	Do.
Près de Fléron, Fléron	Société Civile des Près de Fléron	Fléron	J. Dartois	Fléron	24,400	Do.
Hasard-Mólin	Société Anonyme du Hasard	Micheraux	P. Andrimont	Micheroux	194,003	Do.
Micheroux, Soumagne	Société Anonyme du Bois de Micheroux.	Soumagne	L. Gathoye	Soumagne	82,177	Do.
Crahay, Soumagne	Société Anonyme de Maureau et Bas Bois.	do	P. Gabrielle	do	67,529	Do.
Herve-Wergifosse, Herve	Société Anonyme de Herve-Wergifosse.	Xhendelesse	E. Goffart	Xhendelesse	106,195	One-fourth bituminous and lean.
Minerie, Battice	Société Anonyme de la Minerie.	Battice	J. Preudhomme	Battice	28,874	Lean and anthracitic.
Wandre, Wandre	Suermondt frs	Wandre	H. Suermondt	Aix la Chapelle	92,700	Lean.

Some three or four years ago, the principal coal mine owners of the Kingdom formed what is here termed a syndicate, in order to protect themselves against an overproduction and at the same time to maintain the coal at prices which they considered remunerative. As a consequence of measures taken by the syndicated companies, the stock of coal on the surface, which in past years had often been largely in excess of the demand, was at the end of the year 1899, as officially determined, only about 300,000 tons, out of a total production for the year of something like 22,000,000 tons.

Of the total production above referred to, about 4,000,000 tons were exported and the rest, increased by the importation of about 2,000,000 tons, was consumed in the country itself. The quantity exported went to France, Germany, the Grand Duchy of Luxemburg, Italy, and Switzerland, and the importation for the greater part was from Great Britain, with a small quantity from both France and Germany.

There is a tendency to decrease exportations, and an unmistakable tendency to increase importations, which up to this time have been principally of coal for gas-making purposes, a quality which is said not to exist in Belgium except in the mines of Flénu.

The importation from Germany consists principally of briquettes, and that from France is confined to the industrial district of Tournai, which, on account of its long distance from the center of Belgian production, can import from France at a profit.

Complaint is made that since the formation of the syndicate above referred to, the quality of the Belgian coal has depreciated, the producers no longer taking the trouble to wash the coal ordered by customers.

It is not possible to give the exact prices of the different qualities of coal bought at the mines, for the reason that these have been all made subject to considerable fluctuations, due in a large measure to the prosperity of nearly every branch of industry throughout the course of the past year. According to information furnished from an official source, the average price of coal sold at the mines, taking all qualities together, was about $3.47 a ton for the year 1899.

The most important consumer and customer of the Belgian mine owner is without doubt the State itself, inasmuch as the annual consumption in the railway establishments, of which the State, as is well known, has the monopoly, reaches a total varying from 1,000,000 to 1,200,000 tons.

The quality of coal purchased by the State is as follows: The small semibituminous, the small bituminous, the semilean (maigre), seminut coal, and briquettes for locomotives.

The purchases of the State in Belgium are made by contracts resulting from a public competition, in which foreign producers can also offer bids. In consequence of the above-cited fact, the State pays from about 10 to 15 per cent less than the prices paid by other consumers.

In the following table can be seen the kinds, quantity, and prices paid by the State for the three years last preceding:

Quality of fuel.	1897.		1898.		1899.	
	Quantity in tons.	Average price per ton.	Quantity in tons.	Average price per ton.	Quantity in tons.	Average price per ton.
Small semibituminous	526,980	$1.67	682,642	$1.86	....	....
Small bituminous	151,838	1.87	112,380	2.02	1,135,215	$2.26
Lean coal (maigre)	314,431	1.28	247,185	1.41	....	....
Nut coal	37,031	2.02	41,809	2.18	45,301	2.68
Briquettes for locomotives	....	....	430	3.18	3,650	3.76
Total	1,030,280	1.59	1,084,446	1.79	1,184,166	2.28

Besides the quantity bought in Belgium, the State purchased from the English mines the following: 30,000 tons semibituminous, second class, at $2.71 per ton; 100,000 tons semibituminous, third class, at $3.50 per ton; 65,000 tons bituminous, at $3.69 per ton.

The next largest consumers known to me are the plate-glass manufacturers of Belgium, who together produced something less than 2,000,000 square meters of glass during the past year.

During the period mentioned, the rise in the price of coal, it is estimated, cost these manufacturers an additional outlay of between $77,200 to $96,500.

Any exporters desiring to reach this branch of industry should address Mr. James Gernaert, administrateur-délegué de la Société Anonyme des Glasses de Roux, Roux, Belgium.

To illustrate the importance of the industry above referred to: In 1873 the plate-glass manufacturers of Courcelles, Roux, and Oignies, the only ones existing in this country at that time, produced from 100,000 to 120,000 square meters per year. In 1889 they together produced 400,000 square meters, and it is estimated that the amount for 1900 will exceed 2,000,000 square meters.

From the foregoing, it will be possible for any intending exporter to picture the present state of the coal industry in Belgium and form his own idea as to the possibilities of the future, as well as of the chances of opening up an immediate market for our products.

GEO. F. LINCOLN,
Consul-General.

ANTWERP, *May 25, 1900.*

BRUSSELS.

I am informed by coal dealers in this city that there is a demand for imported coal of all kinds, especially steam coal and that for manufacturing purposes.

PRICES.

Prices have been controlled by the rates paid by the Government for coal, contracts for which were concluded at Charleroi on the 20th of February, 1900. Contracts for industrial and domestic coal, which ordinarily are not finished before the end of April, are already nearly concluded at the following prices per ton: Fine maigre (uninflammable coal), 17 to 18 francs ($3.281 to $3.474); menus quart gras (Type III), 20 francs ($3.86); fine demi gras (Type IV), 21 francs ($4.053); grosses houilles (extra large lump, no dust), 43 francs ($8.299); grosses gailleteries (large lumps, no dust), 43 francs ($8.299); petites gailleteries (medium size lumps, no dust), 43 francs ($8.299); gailletins et tétés de moineaux (nut coal), 45 francs ($8.685); tout-venant (through and through 80 per cent dust), 36 francs ($6.948); gailletins anthracite (anthracite, all dimensions), 40 francs ($7.72); fines graineuses (fine grains), 30 francs ($5.79); briquettes perforées (perforated bricks), 40 francs ($7.72).

SOURCES OF SUPPLY.

The sources from which the present coal supply is obtained are Belgium, Germany, and England.

There are 73 coal mines in active operation in this consular district. The production in 1898 amounted to 16,434,820 tons, and in 1899 to 16,183,770 tons. The total production in Belgium is estimated at 22,000,000 tons per annum.

AMERICAN COAL.

A small quantity of American anthracite coal is sold on this market. As far, however, as I have been able to learn no direct importation of our coal has yet been made into this consular district. Coal dealers in Brussels express the opinion that American coal for manufacturing and domestic purposes, especially anthracite coal, would find ready sale in Belgium. There are no restrictions on the import of or objections to American coal. There is no duty on foreign coal entering Belgium.

IMPORTATION AND EXPORTATION.

In 1898 the importation of coal into Belgium amounted to 2,202,517 tons, and in 1899 to 2,844,274 tons.

The amount of coal exported in 1898 was 4,579,955 tons, and in 1899 4,568,938 tons. (See following table.)

CAUSES AND PROBABLE DURATION OF SCARCITY OF SUPPLY.

In consequence of the reduction of hours and increase in wages accorded miners during the past two years, a workman now receives as much wage for five days' work as he formerly earned in six days. As the amount earned is sufficient and satisfactory for his daily wants, he will only work five days. Mine owners, in order to keep up the prices for coal, have notified dealers in this district that hereafter the quantity furnished to them for their yearly supply will be reduced 10 per cent, consequently the dealers in this city have decided to reduce the list of their customers at least 10 per cent; that is to say, they have agreed to supply punctual customers as heretofore and to drop slow-pay ones.

The scarcity is also attributed to the war in South Africa, speculation, increased activity in metallurgy, the rapid rise and extension of the general industrial energy of the country, and the unusually large demand from France for domestic and other coal. The duration of the scarcity of coal, it is estimated, will probably be three years.

The adjudication of the important Government contracts at Charleroi, February 20, 1900, shows a decided rise in the price of coal of all kinds and qualities. The increase is about 5 francs ($0.965) per ton on menu (small coal) and 10 francs ($1.93) on gailleteux (lumpy rubble coal). Prices for coal have not been so high since 1874. The scarcity of coal was so pronounced during the month of March that manufacturers did not hesitate to use, in spite of the extremely high price, selected coal reserved for domestic purposes, and considered themselves fortunate in securing this, as the insufficiency of coal for industrial purposes was keenly felt. The demands for consumption greatly exceeded the production, and in several instances directors exhausted their reserve stock to meet engagements, and in some cases were obliged to furnish coal of inferior quality, as wholesale orders absorbed everything. High prices dominate the market since the recent conclusion of Government contracts.

TRANSPORTATION FACILITIES.

Transportation in Belgium is by canals and railways. Freight rates are: From Charleroi to Brussels, per carload of 5,000 kilograms (11,000 pounds), 4.36 francs ($0.841) per 1,000 kilograms (2,200 pounds); per carload of 10,000 kilograms (22,000 pounds), 3.14 francs ($0.606). From Mons to Brussels, per carload of 5,000 kilograms (11,000 pounds), 4.66 francs ($0.889) per 1,000 kilograms; per 10,000 kilograms (22,000 pounds) 3.34 francs ($0.644) per 1,000 kilograms, and on each shipment an additional tax of 30 centimes ($0.057) for recording and for letter of advice of shipment is charged.

There are six lines of ocean vessels plying between Belgium and the United States, viz: Red Star Line, Antwerp to New York and Philadelphia; Puritan Line, Antwerp to Baltimore and Boston; Wilson Line, Antwerp to New York; White Cross Line, Antwerp to New York and Boston; New Orleans Line, Antwerp to New Orleans; San

Francisco Line, Antwerp to San Francisco, San Diego, Redondo, Portland, Port Townsend, Everett, Seattle, and Tacoma (sailing vessels). There are at present no quotations of freight rates for coal from Antwerp to New York. The rate on coal from the United States to Antwerp is based upon the prevailing rate for grain. For example, the rate on grain being to-day 4¼ pence ($0.823) per bushel, the rate for coal would be 16 shillings 6 pence ($4.0149) per ton, and with a rise in grain the rate might reach 19 shillings ($4.6232). With a low figure on grain—for instance, 2¼ pence ($0.456)—the rate for coal would vary from 11 to 14 shillings ($2.6766 to $3.4066) per ton.

CONDITIONS FAVORABLE TO AMERICAN COAL.

In 1898, Mr. Henry S. Fleming, secretary of the Anthracite Coal Operators' Association, 26 Cortlandt street, New York City, was sent abroad to look into the coal trade in Europe, and during his visit to Brussels in November, 1898, said to me that as a result of his investigation he was of the opinion that there was a good market in Europe for American coal, but in order to make it profitable we should establish a line of steamers to carry our coal to Europe. In view of the existing scarcity and demand for coal in Europe, the situation, in my opinion, offers a great opportunity for owners of coal mines in our country to build up a large and profitable export trade.

I have recently noticed in the Brussels newspapers that a French company has contracted for 75,000 tons of Cumberland coal; that the Russian Government is negotiating for 2,000,000 tons of American coal, and that an English syndicate of coal dealers has just closed a deal by which 2,000,000 tons of Alabama coal are to be delivered at the port of New Orleans, La., for exportation to England within two years' time, and that the syndicate will run its own steamers in transshipping the coal. The Russian Government has taken temporary measures to meet the general scarcity. Odessa has been authorized to import 96,0000 tons of foreign coal for household purposes at a reduced rate of duty, and similar reductions have been made at other ports of Russia.

The free import of foreign coal has been authorized for the needs of the population of Warsaw, as also for all Russian railroads. It is estimated that this year there will be a deficit of nearly 1,000,000 tons in the Donetz and Dombrooski basins. Orders have just been given by the Russian Government to Welsh coal owners for 140,000 tons of smokeless coal at 20s. ($4.8665) per ton. Notices have been given at the Dowlais, Cyfarthfa, and Merthyo Tydril collieries of an advance of 5s. ($1.22) per ton for steam coal. House coal is being retailed to local consumers at 30s. ($7.2965) per ton, and best coal at 35s. ($8.5165).

All signs indicate that in the near future, the exportation of American coal to Europe will assume immense proportions, and if our mine owners or railway companies interested in coal traffic, would establish a regular line of tramp steamers or large American schooners of great carrying capacity between Philadelphia, Baltimore, or Newport News and Antwerp or some other central European port (which on returning might carry heavy freight, such as cement, glass, etc.), and open offices abroad from which agents could visit dealers and consumers, an extensive export trade in coal conld be built up and easily maintained.

Table showing Belgian importation and exportation of coal during the years 1898 and 1899.

Countries.	Imports.		Exports.	
	1898.	1899.	1898.	1899.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Argentine Republic			17,715	12,630
Australia (South)			4,074	6,850
Austria		10		
Brazil			14,760	5,170
Bremen (Germany)			2,660	8,500
Canada			4,720	1,850
Chile			35,085	31,735
China				1,620
Cuba and Porto Rico				2,210
Dutch Indies.				1,330
Egypt			5,090	6,240
England			139,428	112,960
France	342.558	777,068	3,265,539	3,284,493
Germany	603,725	604,386	232,167	280,743
Hamburg	1,253,854	1,452,435	1,440	1,275
Holland			344,553	299,279
India	2,045	10,304	4,250	2,860
Italy			16,340	4,427
Kongo Free State				5,601
Luxemburg (Grand Duchy)		71	337,947	360,163
Malta			405	
Mexico			5,050	2,850
New South Wales				1,018
Norway			1,855	1,200
Portugal				2,210
Russia			17,282	13,900
Spain			7,110	5,620
South African Republic				1,000
Sweden			10,022	9,800
Switzerland			47,383	42,480
Turkey			6,170	5,902
United States			35,343	51,047
Victoria (colony)				2,600
Other countries	335		23,567	4,355
Total	2,202,517	2,844,274	4,579,955	4,568,938

The estimated value of coal for 1898 was 16.50 francs ($3.184) per ton; for 1899, 18.50 francs ($3.57).

The importation of coal in 1899 increased 641,757 tons as compared with 1898, and the exportation decreased 11,017 tons.

GEO. W. ROOSEVELT, *Consul.*

BRUSSELS, *April 12, 1900.*

GHENT.

At the present time, the opportunity for the importation of both bituminous and anthracite coal into this consular district appears very favorable. There is no United States coal imported here. Coal is mined in Belgium--bituminous in Hamaut, Namur, and Liege districts, and anthracite in Namur district. There are no coal mines in Flanders. The manufacturing and milling interests of Ghent consume large quantities of coal. I am credibly informed that at least 170,000 tons of semibituminous are used annually for the production of steam; and 60,000 tons of bituminous and 35,000 tons of anthracite are employed for heating purposes. There are no statistics to be had as to the total quantity of the different kinds and qualities of coals consumed in this city or consular district. It can be safely stated that about 50 per cent of the bituminous coal used in this district is of foreign production. There is no foreign anthracite coal to be found in this market.

The annual statistics of the port of Ghent for the year 1899 state that 178,357 tons of coal of all kinds arrived through the canal of Terneuzen.

There is also an importation by rail, probably one-third as much as that by canal, but there is no record to be obtained here either as to number of carloads or quantity.

The annual statistics of commerce for 1898, as issued by the Belgian minister of finance, on importation and exportation of coal shows the following table:

Importations.

Country.	Quantity.	Value.
	Tons.	
Germany	1,253,854	$3,982,898
England	342,558	1,132,233
France	603,725	1,922,890
Holland	2,045	6,512
Other countries	335	1,066
Total	2,202,517	7,045,599

Average value per ton, $3.18.

Exportations.

Country.	Quantity.	Value.	Country.	Quantity.	Value.
	Tons.			*Tons.*	
France	3,265,539	$10,399,108	Brazil	14,760	$47,003
Netherlands	344,553	1,097,228	Sweden	10,022	31,915
Luxemburg	337,947	1,076,192	Spain	7,110	22,642
Germany	232,167	739,335	Turkey	6,170	19,548
England	139,428	444,008	Egypt	5,090	16,209
Switzerland	47,383	159,891	Mexico	5,050	16,081
United States	35,343	112,550	Canada	4,720	15,030
Chile	35,085	111,728	British Indies	4,250	13,534
Argentine Republic	17,715	56,413	Other countries	34,001	109,382
Russia	17,282	55,034			
Italy	16,340	51,034	Total	4,579,955	$14,584,866

Average per ton, $3.18

Returns issued by the minister of the interior and of public instruction show the following table of the production of coal in Belgium in 1898:

Year.	Production.			Total expense.	Profit per ton.
	Quantity.	Value.			
		Total.	Per ton.		
	Tons.				
1895	20,450,604	$37,317,901.00	$1.82	$35,716,580.00	$0.08
1896	21,252,370	38,987,930.00	1.84	36,884.809.00	.10
1897	21,492,446	42,589,696.00	1.98	38,815,195.00	.18

The production of coal for the year 1899 was less in quantity, but of greater value per ton, with increase of expense and a considerable increase of profit per ton over 1897 or 1898. Both Antwerp and Ghent are centrally located for the distribution of coal to interior points in Belgium. The port of Antwerp accommodates the deepest draft ocean going vessels, whereas Ghent, which is reached through the Terneuzen Canal, can only accommodate vessels of a carrying capacity of from 1,800 to 2,000 tons. The facilities for handling coal at this port are good. Consignments of coal for Ghent by way of Antwerp can be transferred there to barges, which go by way of the Scheldt River to Ghent. Barges employed in this trade carry as much as 450 tons. The transfer charges from ocean vessels to barges are 60 centimes ($0.1158) per ton; river freight rates are 1.50 franc ($0.2895) per ton for barge cargo. Navigation is open on the Terneuzen Canal and Scheldt River throughout the year.

The following prices are furnished by a reliable coal dealer of this city: Wholesale on board at the collieries per ton of 2,204.6 pounds, Belgian semibituminous, from 19 to 21 francs ($3.67 to $4.05); bituminous, first quality, from 28 to 29 francs ($5.40 to $5.60); second quality, 2 francs ($0.386) less; anthracite, 28 francs ($5.40); French and German semibituminous, 17 to 19 francs ($3.28 to $3.67); bituminous, first quality, from 26 to 27 francs ($5.01 to $5.21); second quality, 2 francs ($0.386) less; English semibituminous and bituminous cost, delivered on board at Ghent, from 2 to 2½ francs ($0.386 to $0.483), less than Belgian prices at the collieries with freight added to Ghent.

The aforesaid are the wholesale prices to-day, April 4, and in comparison with prices obtained during 1898 and early part of 1899, there is an increase of 100 per cent on semibituminous, 70 per cent on bituminous, and 37 per cent on anthracite. Retail prices in this city during 1898 and first half of 1899 were: Belgian bituminous from 22 to 26 francs ($4.24 to $5.02); anthracite, from 29 to 31 francs ($5.60 to $5.98); French and German bituminous, from 1 to 2 francs ($0.193 to $0.286), cheaper; English, 2 to 3 francs (0.286 to $0.579), cheaper than

Belgian. Prices vary according to season of the year. To-day, Belgian bituminous sells for 40 francs ($7.72); anthracite, 40 francs ($7.72); French and German, 38 francs ($7.33), and English, 37 francs ($7.14).

In calculating prices, it should always be borne in mind that a Belgian ton contains 2,204.6 pounds.

Belgian semibituminous coal contains from 75 to 80 per cent slack and from 20 to 25 per cent lump. Its productive capacity is from 8 to 9 pounds of steam per each pound of coal, and it contains from 12 to 13 per cent ash.

German and French bituminous are considered equally as good as the Belgian. English bituminous that reaches this port is of an inferior quality and does not have more than 80 per cent of the heating capacity of the Belgian, German, or French bituminous. Belgian anthracite lacks the hardness, color, and brilliancy of the Pennsylvania product, and is much lighter in weight.

Owing to the method of construction of the furnaces in the mills and factories of this city and vicinity, semibituminous coal is almost exclusively used for the production of steam. Present indications for the consumption of coal for the year 1900 are that the demand will be as good as that of 1899, with probabilities of a slight increase.

How long the European demand for coal will continue will depend to a great extent upon the continued prosperity of the manufacturing industries and the English-Transvaal war. It is said that should the war close within the next three months, it could not affect present prices very materially for the balance of the year. There are no stocks of coal on hand at any of the mines of Belgium, Germany, France, or England.

RICHARD LE BERT, *Consul.*

GHENT, *April 3, 1900.*

LIEGE.

The demand for imported coal in this consular district is small ordinarily, but last year there were imported from Germany 430,823 tons, and from Holland 7,242 tons, and of coke, 151,034 tons from Germany, and 330 tons from Holland. The coal-miner's strike in the spring of 1899, which lasted for several weeks, and for the time almost entirely closed the mines, was responsible for the large imports.

During the year there were forty-one coal mines in operation, producing about 5,500,000 tons and giving employment to 30,289 persons, of whom 22,811 were employed below and 7,428 above the surface. The average wages of these miners were 3.67 francs, or 70.8

cents per day, or 1,128 francs ($217.70) for the year of three hundred and three days. It is estimated that the coal mines of this consular district will be exhausted within thirty years, at the present rate of production. There are now about forty mines so far exhausted that it does not pay to work them, and six of those that were worked in 1898 show a loss.

During 1898, there were exported from this district 1,095,837 tons of coal, nearly one-half going to France, and during 1899, although I am not able to obtain the exact returns, the figures were about the same.

It is difficult to get the total consumption, but it is very large, reaching nearly 5,000,000 tons for 1890. The mines of the district usually produce all consumed, unless a special kind as desired, as with anthracite, the higher grades of this coal not being mined here.

One of the reasons why the price is so high here is the great depth to which they must go for coal, and the thinness of the veins. The average thickness of the veins worked in 1898 was 27½ inches, and at an average depth of 301 meters, or 987 feet. I am informed that in most cases the cost of pumping was the greatest item of expense, and that 15,529 horsepower was required to keep the water from the forty-one mines operated.

Steam coal and coke are in the greatest demand at present. The average price of medium steam coal is 22 francs, or $4.25 per ton, as against 11 francs, or $2.12, for 1899, and of coke, 53 francs, or $10.23, per ton, as against 28 francs, or $5.40, for 1899.

The principal reason for the present high price of coal is said to be the formation of the coal combinations of Europe, and the great demand from all the industries. The price will probably not drop much within the next year, and it is thought that it will never again reach the 1898 mark.

So far as I have been able to learn, no American coal has been used in this consular district.

Consular Agent Henry Dodt, at Verviers, informs me that parties at that place have been in correspondence with Philadelphia firms for prices, and if proper quotations are made and low enough freight rates can be secured, a market can be found there for many thousands of tons during the year.

The transportation facilities from the port of Antwerp to Liege are excellent, with rates as follows: Open car of 22,000 pounds, 22.10 francs, or $4.27; by canal (which takes about ten days for the trip), 86.8 cents per ton of 2,200 pounds.

ALFRED A. WINSLOW, *Consul.*

Liege, April 9, 1900.

FRANCE.

BORDEAUX.

The subject of importing American coal into France has received much attention from the railway officials of France, and manufacturers and capitalists generally in this consular district during the past three months. Interest in the subject has been stimulated (1) by the high price of English coal, (2) by apprehension that the supply might be cut off by possible political conditions, and (3) by a general feeling that it would be good policy at all events to have two sources of supply. The conditions for establishing such a trade are altogether favorable, if the question of freight can be so adjusted as to make competition with Cardiff coal possible.

The Compagnie Bordelaise, which runs a line of steamers between this city and New York, recently brought over part of a cargo of coal and put it on the market at 39 francs ($7.52) per ton. Cardiff coal had been selling at 40 to 42 francs per carload on the quay, but fell at once to 37 to 39 francs per ton, in the face of competition. Another cargo of American coal on the way was sold, I am informed, at 38 francs ($7.33) per ton in bulk. The American coal is well liked here as a heat producer, but is pronounced very dusty, and in this respect inferior to English coal. There is, however, a distinct and positive desire to introduce American coal, if cost will permit.

A party at Bayonne took an option from a coal company in Baltimore, on terms that seemed to promise a successful importation, but on wiring to London for freighters to bring over 100,000 tons, it was found that freight could not be secured at a rate to make it profitable, and the effort had to be abandoned.

To my personal knowledge, the French railways belonging to the State, and another of the greatest consumers of coal in France, have each an agent in the United States at this time investigating this subject. These agents applied to me for letters of identification and introduction to parties who might assist them in such inquiry. I do not know what has been the result of their investigations, but have no doubt that a large market for American coal might be secured here in France with the utmost ease, if the freight question can be arranged so as to put American coal on something like equal terms with the English article. I doubt, however, whether this can be done, unless the scarcity of English coal reaches a point where it is impossible for it to be delivered here for less than 40 francs ($7.72) per ton. Until that point is reached, the English coal will drop below cost at any time such importation begins, and undersell long enough to shut out the American product.

The difference in freight rates does not depend so much on the comparative distance, though this is very great. For instance, a Cardiff freighter can, if necessary, make two or three round trips a month from the pit to Bordeaux or the other Channel ports of France, with reasonable time for loading and unloading. On the contrary, the ordinary steam freighter can with difficulty make a single round trip per month between any American port and Bordeaux. In other words, the freight cost of American coal delivered at Bordeaux is at the best three times that of English coal. As a matter of fact, however, it is, and must continue to be, about six times as much.

This is a tremendous difference to be overcome, but it is not the chief difficulty. This real difficulty has long been apparent to me, not only in the case of coal but of most other American products. I have not mentioned it before, lest I should be charged with reporting conditions not wholly favorable to the generally accepted views of the ease with which we may seize and hold an European trade of unlimited magnitude.

The abstract question of freights between the United States and Europe, especially France, is one of some complexity and not wholly encouraging to the American exporter. It is usually assumed that, so far as the cost of freight is concerned, the American exporter stands on a level with his European compeer, because it is no farther from the United States to Europe than from Europe to the United States. While this is true, the idea is very fallacious. Even if our interocean marine were as large as that of our European competitors, the difficulty would not be obviated. The question is affected by three important considerations: (1) The number and capacity of ocean steamships carrying passengers as well as freight. (2) The sailing bounties paid to ships of different nationalities. (3) The number of ships plying direct between the United States and French ports.

The many lines of passenger steamships and the competition which their increase in number would appear to make inevitable, would seem to secure, at least for a considerable period, reasonable rates of freight between the United States and Europe. Several circumstances make reliance on this apparently indubitable generalization a very delusive thing. The chief of the conditions irreconcilable with this conclusion are the following:

These great passenger lines all converge at a few points upon the British Channel, or so near it as to be practically identical, so far as continental freight distribution is concerned, particularly as regards France. Liverpool, Southampton, London, Hamburg, and Havre are the points at which they land American freights. From these ports, goods must be reshipped by rail or steamer to all points in France.

All these ports except Havre are outside of French territory, and no passenger steamships except the French ones sail from our ports direct to France without first stopping at a port of some other European power. This stoppage adds a "surtaxe" of 3 francs 60 centimes ($0.70) per 100 kilos (220 pounds) to the ordinary tariff on most goods introduced into France from the United States. Thus, goods shipped from the United States to France by any passenger line except the French one must pay something more than $6 a ton higher duty than if they came direct from an American to a French port. This distinction in favor of direct shipments from the American to the French port naturally cuts off all competition on the part of other passenger lines in most kinds of freight. It is true that a very large portion of American freight still comes by way of Southampton, Liverpool, and Hamburg, but it is at a great loss to American shippers, who do not seem to realize the facts.

No such restriction affects the return trade. Competition is open between all lines on freight to the United States, which rates are much lower than from the United States here. These two conditions are united with another, which seems to have been quite neglected in considering this subject. This is that a much larger proportion of French exportation to the United States is of a character to be carried by passenger ships than of the exports from the United States to Europe. In other words, a larger portion of our exports is what may be termed distinctly "cargo freights," than of European exports to the United States. To state it in another form, I may say that it requires more tonnage to carry an equal value of our freight to Europe than from Europe to the United States, and that a larger portion of the latter may be carried on regular passenger ships.

Our exports embrace bulky and sometimes inconvenient and unfit material for passenger lines, such as cotton, petroleum, lumber, grain, live stock, and other similar products. What is the result? Take a petroleum boat, for example. A "tanker" coming from the United States can not get a cargo back because there is nothing she can carry. She must always return in ballast. It costs, therefore, two trips across the Atlantic to get one cargo of petroleum into Europe. Even if sent in barrels, it is too dangerous to come on a passenger ship. The same is true to a less extent of cattle ships and other strictly cargo craft from the United States. There is not enough of the same class of freight going the other way to give return cargoes.

To illustrate: During the past three years, in addition to the "tankers" bringing petroleum to this port, there have been at least a score of cargoes of naphtha, gasoline, lumber, staves, wheat, cotton, and similar products brought by "tramps," either steam or sail. Only two of these took back cargoes—one of manganese ore and the other of cork. What is the consequence? At least 95 per cent of the cargo ships bringing American exports to this port have had to return in ballast.

Coal would be an addition to this sort of freight. The Cardiff coal liner to Bordeaux not only makes three times as many trips as the American coal carrier could, but she often, perhaps generally, carries a return cargo of pit props or other merchandise direct to Cardiff or to some port but little out of her regular course. On the other hand, the exporter of American coal, or the French importer, must pay for two trips across the Atlantic in order to land one cargo of coal. As compared with the English coal transport, it is 3,000 miles loaded and 3,000 miles in ballast against—say, 500 miles loaded and a return load half the time. Can American coal be delivered cheaply enough to overcome this inequality in freight? I can not, therefore, consistently report that in my opinion there is sound reason to expect any considerable trade in American coal with France, unless conditions render it necessary to abandon reliance on English mines.

ALBION W. TOURGÉE, *Consul.*

BORDEAUX, *April 11, 1900.*

CALAIS.

The annual consumption of coal in France is about 42,000,000 tons, while the annual product of the country is only about 32,000,000. The shortage of 10,000,000 tons is supplied principally from England. There exists a shortage in the coal supply at this time, due to its increased use in metallurgy.

My consular district embraces the the Pas-de-Calais and La Somme. In the Pas-de-Calais are found the largest coal mines in France, producing about 15,000,000 tons annually. The average cost of coal at these mines is 8 francs ($1.54) per ton, but the average selling price is about 22 francs ($4.24) per ton at the mines. It costs 3 francs (57 cents) per ton to transport it from the mines to Calais. English coal is supplied at Calais at about 23 francs ($4.43) per ton. Calais and Boulogne-sur-Mer import from England some 50,000 tons annually. The Department of Pas-de-Calais consumes 5,000,000 tons annually. No American coal is used here. The *Ville-de-Douai*, the only steamship running regularly between Calais and America, uses American coal, and the merchants here are not ignorant of its merits. About 10,000 tons are exported annually from Calais.

As to the cost of transporting coal from America to Calais, I am not advised. The duty is only 1 franc 20 centimes (23 cents) per ton, and 10 centimes (2 cents) for statistical purposes. For the foregoing infortion I am indebted to M. Leroy, the agent of all the mines of Pas-de-Calais in this city.

J. B. MILNER, *Consul.*

CALAIS, *May 4, 1900.*

HAVRE.

Owing to the widespread scarcity of coal and the abnormally high prices which prevail in foreign countries, there would appear to be a favorable opportunity at the present time for the introduction of American coal into some of the markets of Europe, provided that this opportunity be taken advantage of immediately. The large French consumers of coal are investigating the question of the future use of American coal, in order to determine whether its quality will be suitable for their purpose, and whether it can be delivered in their ports under reasonable conditions.

During the past six months numerous letters have been received at this consulate, and personal visits have been made by coal dealers and consumers of coal, all asking for information regarding the American combustible.

Various causes have been assigned for the existing coal crisis, among the most important being the increased consumption by the steamship companies and industrial concerns, the strikes which have successively taken place in the mining centers of Europe, the abnormal demands of the British Government for its wants due to the war in South Africa, and, in no small measure, the advantage which the speculators are taking of the situation.

It would be difficult to foretell the duration of the present crisis, as there is a great diversity of opinion expressed by those whose experience would entitle them to speak. It will take some time to fill the unusually heavy orders which I am informed have been received from France, Germany, Italy, and Russia for English coal. Cape of Good Hope must need large quantities for the return voyage of the numerous transports required during the South African war, and after the war is over the railroads and the industries must be supplied. It is not likely, therefore, that there will be any important reaction during this year.

Once a foothold is obtained, American ingenuity and tenacity of purpose would make our export trade in coal a permanent one—one which will be of great value to our miners and shippers of coal, and one which should assume large proportions. The Économiste Français in a recent article on the scarcity of coal says: "Even when the crisis which now prevails in the coal market disappears, which will not be for some time yet, or when it diminishes in intensity, it may be considered as certain that the new competitors for the world's coal trade will not withdraw; but they will continue to compete more or less for the wants of the industries and of navigation, and will hold in check the unwarrantable demands of the English coal shippers."

In forming an intelligent opinion of the importance of the French coal trade which is open to competition to foreign shippers of coal, the following information will be of service:

Production, importation, and consumption of coal in France for the past three years, in tons of 1,000 kilograms (2,204.6 pounds).

Year.	Production.	Imports (Commerce général).	Consumption.
	Tons.	*Tons.*	*Tons.*
1897	30,797,629	10,198,290	40,038,300
1898	32,356,104	10,322,988	41,097,500
1899	[1] 32,933,788	11,658,360	[2] 41,951,564

[1] Approximate.

[2] Estimated.

The following table indicates the countries from which the coal was imported, and the weights:

Country.	1899.	1898.	1897.
	Tons.	*Tons.*	*Tons.*
England	6,923,470	5,735,363	5,746,829
Belgium	3,958,250	3,858,317	3,770,059
Germany	766,330	718,785	676,219
Other countries	10,310	10,573	5,183
Total	11,658,360	10,322,988	10,198,290

As will be seen from the above statements, the annual consumption of coal in France is nearly 42,000,000 tons, of which over 10,000,000 tons are imported to supply the deficiency of the native production. According to the Économiste Européen, the consumption of coal in France has doubled in twenty years, while the extraction of coal from French mines has doubled only in twenty-six years, which would appear to be a great cause of anxiety for the future supply of coal in this country.

Great Britain easily holds the first rank in the exportation of coal to France and to other European countries. The explanation is not difficult. Most of the mines are near the seaboard, and freights are low to the principal markets, especially to those of France, Belgium, Italy, Spain, Sweden, and Norway—which are now dependent upon Great Britain for their extra wants. Some of these countries can supply themselves in certain districts with English coal cheaper than with that of their own production.

The following are the principal ports of France to which English coal is sent, in the order of the importations. The figures are, in some instances, only approximate and do not show the total importations, but they will serve to indicate where English coal is received in France.

	Tons.		Tons.
St. Nazaire	833,826	St. Malo	210,000
Havre	701,736	Boulogne	166,875
Marseilles	648,840	Rochefort	133,066
Rouen	638,576	Honfleur	115,387
Bordeaux	592,608	Trouville	88,265
Caen	335,800	Dunkirk	78,376
La Rochelle	291,719	Brest	64,986
Nantes	289,180	Cherbourg	60,000
Dieppe	268,614	Fecamp	43,068
Bayonne	258,974		

Although it may be true that our American miners and transportation companies, owing to the great prosperity which is reigning in the United States, are taxed to almost their full capacity in supplying the home demand for coal, it would be well to consider whether it would not be good business policy to enter into competition with Great Britain for a portion of her great foreign coal trade. A glance at the following figures will show to what extent our country is participating in supplying the wants of foreign consumers.

Exports of coal from the United States and Great Britain during the past three years.

Country.	1897.	1898.	1899.
	Tons.	*Tons.*	*Tons.*
Great Britain	47,552,676	47,827,000	55,834,369
United States	3,698,031	4,503,405	5,752,150
Difference in favor of Great Britain	43,854,645	43,323,595	50,082,219

The average prices per ton of American coal, according to the declared values contained in the United States Treasury statistics, were:

	1897.	1898.	1899.
Anthracite	$4.49	$4.23	$4.18
Bituminous	2.22	2.13	2.12

The average prices of English coal f. o. b. were: 1897, $2.16; 1898, $2.41; 1899, $2.61.

The principal countries to which Great Britain exported her coal and the approximate quantities were as follows:

	Tons.		Tons.
France	6,923,470	Holland	1,277,792
Italy	5,513,452	Brazil	967,778
Germany	5,059,666	British East Indies	863,177
Sweden and Norway	4,493,586	Portugal, Azores, and Madeira.	755,365
Russia	3,397,791	Turkey	490,688
Spain, and Canary Islands	2,292,395	Malta	419,461
Egypt	2,125,921	Gibraltar	325,837
Denmark	2,051,423	Other countries	6,210,349

Added to which were 12,226,801 tons for steamers in foreign trade.

There is no coal mined in any of the departments forming the consular district of Havre, but mines for the extraction of lignite and coal are found in thirty-eight of the other departments of France. The principal coal mines are those in the departments of Pas-de-Calais, and Nord, with a production in 1899 of 19,958,637 tons; then come the mines in the departments of Loire, Rhone, Isère, 3,719,666 tons; Saône-et-Loire, Nièvre, Côte d'Or, Allier, 2,040,771 tons; Gard, Ardèche, 2,050,626 tons; Aveyron, Tarn, Lot, 1,851,795 tons; and Puy-de-Dôme, 1,189,422 tons. There are other smaller mines. The production of those mentioned above exceeds 1,000,000 tons annually.

The most important lignite mines are situated in the departments of Bouches-du-Rhône, Var, Basses-Alpes, and Vaucluse, with a production of 540,002 tons in 1899.

The following table shows the exportation of coal from France during the past three years, in tons of 1,000 kilograms (2,204.6 pounds), and the countries which imported the coal:

French coal exports (*commerce général*).

Countries.	1899.	1898.	1897.
	Tons.	*Tons.*	*Tons.*
Belgium	620,330	599,010	709,598
Italy	15,820	31,445	13,742
Switzerland	233,690	244,448	286,185
Turkey	1,330	2,720	2,710
Egypt	250	670	200
Algeria	2,730	5,201	5,867
Other countries	279,150	318,503	140,359
Furnished to steamers:			
French	999,350	1,018,469	924,459
Foreign	314,040	338,792	186,056
Total	2,466,690	2,554,258	2,369,176

The above figures do not indicate the exact amount of coal which was actually mined in France and sent to foreign countries. They include all the exportations of coal of French origin, and also of foreign coal which had been admitted into France by payment of duty, and reexported. The exact proportion of native and foreign coal can not be accurately determined, as statistics of this nature are not kept by the customs administration.

The greater part of the coal consumed in this consular district is imported from Great Britain, as the native coal, owing to the heavy cost of railroad transportation from the mines, can not be furnished as cheaply as the foreign coal. The line of limit of consumption of French coal may be said to pass through Rouen, although considerable quantities of English coal are also used in that region.

The importation of English coal into the ports included in the consular district of Havre amounted to over a million and a half tons in 1899. It is mostly delivered to the railroad and large steamship companies, to the local industries, and, to a smaller extent, it is used for domestic purposes.

The coals imported into Havre are of the most varied nature and composition; steam coal, gas coal, forge coal, coal for domestic uses, dry coals (charbons secs), large coal, coal sieved at the mine and sieved on discharge from vessel, coal as it comes from the mines, nut coal, small coal, etc.

Bituminous coal should contain from 17 to 23 per cent of volatile matters; semibituminous from 13 to 15 per cent, with from 4 to 7 per cent of ashes. On unloading from the vessel, the coal should furnish a minimum of 45 per cent of large pieces for the bituminous coal, and a larger proportion for the semibituminous. In general terms, coal for the industries should resemble as much as possible the Cardiff type, giving much steam with little smoke; and for domestic uses, the Newcastle type, with long flame.

Anthracite coal, mostly of Welsh origin, is used only for domestic purposes. The quantity consumed is very small in comparison with the soft coals, but its use should increase, as heating by stoves is gradually becoming more general. As to quality, it is not as good as American anthracite, and is very expensive, costing retail, delivered at the house, $11.58 per ton of 1,000 kilograms (2,204.6 pounds).

The present rates of freight from Wales to Havre range from 5s. 3d. ($1.27) to 5s. 6d. ($1.33), and from English and Scotch coal ports, from 4s. 3d. ($1.03) to 4s. 6d. ($1.09).

The current market values of the various coals in Great Britain, on April 17, 1900, were as follows: Best English steam coal, f. o. b. Newcastle, 18s. 6d. ($4.50); Welsh steam coal—very best, f. o. b. Cardiff, 22s. ($5.35) to 23s. ($5.60); good ordinary, f. o. b. Cardiff, 20s. 6d. ($4.99) to 21s. ($5.11); other sorts, f. o. b. Cardiff, 19s. ($4.62) to 20s. 6d. ($4.99); Scotch coals, f. o. b. Glasgow, 12s. 6d. ($3.04) to 16s. 6d. ($4.01).

Taking the lowest rates of freight and the prices mentioned above, the cost of English, Welsh, and Scotch coals per ton alongside of the quay, c. i. f. Havre, would be as follows: Best English steam coal, $5.53; Welsh steam coal—very best, $6.62 to $6.87; good ordinary, $6.26 to $6.38; other sorts, $5.89 to $6.26; Scotch coals $4.07to $5.04.

In answer to my recent requests for prices at which American coal could be sold, f. o. b., American ports, I learned that two of our best steam coals, which possibly could be substituted for the best Cardiff steam coals, can be put on board vessel either at Philadelphia, Baltimore, or New York for $2.75 per gross ton. The present ocean freight rates for coal from either of the above ports to Havre range from 16s. ($3.89) to 20s. ($4.87) per gross ton in cargo lots. Taking the lowest freight rate, it would make the cost of the best American steam coal

$6.64 per ton, c. i. f. Havre, which is about the same as the cost of the best Cardiff coal, namely, $6.62 to $6.87 per ton. The European agent of a celebrated American steam coal quotes 28s. 6d. ($6.93) per gross ton, c. i. f. Havre. I have not the present quotations for the cheaper grades of American coal, so can not estimate their cost delivered at Havre.

In my opinion, the future of an American export coal trade will greatly depend upon the ability of our shippers to secure cheap and expeditious ocean transportation. An important American coal firm writes: "The great difficulty at this time in opening up satisfactory business relations abroad lies in water transportation. Vessels are very scarce, freights very high, and it is difficult to get quotations for ocean freights that will hold a sufficient length of time to permit us to communicate by letter with the parties on the other side." Our coal will be able to compete more successfully with British coal in the French Mediterranean ports than in the ocean ports, because of the difference in the freight rates from Great Britain to these ports.

If the ocean freight question could be solved, there is no reason why there should not be a rosy future for an American foreign coal trade. There is no objection among the dealers here to the use of our coal, provided the quality and prices are.equal to those of the coal from Great Britain. It would take some time to become acquainted with our shippers, our methods of transacting business, and our coal; but confidence once established, a lucrative trade may be the result. There is one very important fact in connection with the ocean transport of coals, at least as regards the port of Havre, and probably other French ports, which our shippers must consider; and that is, the cargoes must not be too large. They should not be over 2,000 tons, as the Bassin Vauban, where all the facilities for unloading coal ships in Havre are installed, does not admit of larger vessels. Coal should be shipped in solid cargoes, as it is not feasible to unload coal in the other basins where general merchandise is received, there being no arrangements at present for storing it. Besides, there are but one or two dealers in Havre who have sufficient capacity in their plants for handling large quantities. They are accustomed to receive cargoes of British coal ranging from 700 to 1,300 tons, and are equipped accordingly.

The maximum and minimum French customs duties on coal are the same, 1 franc 20 centimes (23 cents) per ton of 1,000 kilograms (2204.6 pounds). American and English coal, therefore, in this respect, would enter France under the same conditions.

A. M. THACKARA, *Consul.*

HAVRE, *April 26, 1900.*

LA ROCHELLE.

The importation of coal is, after the fisheries, the most important industry of this port. Practically no French coal is used in this consular district, and the prices of English coal have been and are very high. Consequently, there has been a large correspondence with this office on the subject of American coal. Up to the present all persons seeking our product have demanded a single price, covering cost, insurance, freight, and in some instances customs duty. With a single exception, American mines have refused anv figures other than f. o. b. This, the first hindrance to business, could be easily overcome. The low rate of freight (6 francs, $1.16) from Wales to La Rochelle and the prevailing high prices of our coals shut out American competition, unless our merchants are willing to make a special price for their coal destined to ports on the Bay of Biscay. If our mines will make this concession, a very important business is open to them and will in all probability be open for some months. There has been a large demand for samples, which United States dealers have refused, in some instances saying that they were unnecessary and in others being unable to obtain reasonable trans-Atlantic rates for 15 or 20 tons in bags. It is absolutely certain that consumers here will not buy coal of which they know nothing. The furnace grates, both in factories and locomotives, are generally different from ours. Naturally people wish to know by experience if our coal will burn over their grates and, if it will not, to calculate whether the difference in price would pay them to make the changes necessary in using a new coal.

The coal used here is almost exclusively of Welsh origin. The quantity imported during the year 1899 was 361,016 tons, while at Rochefort, 20 miles away, there was imported during the same period 133,996 tons, making a total of nearly half a million tons. Coal is also imported in large quantities at Tonnay-Charente, Royan, and Les Sables. The kinds of coal represent every variety, from very bituminous to anthracite. The qualities sought are usually the best. Very little screened coal comes to this port, "run of the mine" being preferred. On its arrival a cargo is carefully assorted; large pieces are put aside for industrial or domestic purposes, according to size, while the dust is sent to certain factories, where it is mixed with tar and pressed into cubes called "briquettes." The retail price of coal for household use is 55 francs ($10.61½) per ton.

The very best steam Cardiff is worth to-day from 21s. to 23s. ($5.04 to $5.52) f. o. b., while other than this sells as low as 18s. ($4.38). The latest quotations for tonnage from Cardiff to La Rochelle or St. Nazaire are from 6 francs to 6 francs 50 centimes ($1.16 to $1.25). Consequently, the best coal can be delivered c. i. f. La Rochelle for 32 francs 25 centimes ($6.22), while good coal can be secured at 29 to 30 francs ($5.60 to $5.79) c. i. f. A gentleman has just informed me that he would buy 50,000 tons of a suitable American coal at 29 francs 50 centimes ($5.69) c. i. f. La Rochelle. This seems impossible with American prices at 13 to 15 francs ($2.51 to $2.89) f. o. b. Philadelphia or Baltimore, as the freight rates at present are 16s. ($3.89).

Experiments have been made with American coal on the French State railroads, and I have before me a letter from the director, in which he says:

> The result of the experiments made by the State railroads with American coal was perfectly satisfactory, and we consider that it can entirely replace the best Cardiff coal. Unfortunately, the price delivered at a French port (La Rochelle) is a little higher than that coming from elsewhere (Cardiff).

The American coal tried in one instance was the Eureka. I believe with a slight reduction in price on the part of American merchants for coal coming to the Bay of Biscay, a thriving business can be done and some important contracts signed at once.

GEORGE H. JACKSON, *Consul.*

LA ROCHELLE, *April 4, 1900.*

LIMOGES.

The annual consumption in the departments of Haute-Vienne, Correze, Creuse, Vienne, and Tudre is about 150,000 tons. Principal consumption is chiefly at Limoges, for manufacturing china; it amounts to about 35,000 tons of large coal, half being furnished by the French mines of Carmaux, Albi, St. Aubin, and Decazeville.

These mines are not far from Limoges, and carriage by railway costs about $1.50 per ton. The coal costs at Limoges $5.60 per ton of 1,000 kilograms.

It gives good results for manufacturing china; however, for the very large ovens the manufacturers use English coals (large coal of first quality) always twice sifted in the mine. These coals are embarked from Cardiff and Newport (Mon.) and are forwarded to the French ports of Bordeaux, La Rochelle, and Rochefort.

The annual exports of large coal from England to this district are about 16,000 tons.

Cost of carriage by ships of 1,500 tons has been, for the last four months, $1.06 from Cardiff or Newport to Bordeaux, La Rochelle, or Rochefort. Rail transportation from these ports to Limoges costs $1.40.

Foreign coal pays at the French customhouse a duty of 24 cents per ton, and 2 cents is charged for statistics.

The total cost of English coal at Limoges is now $6.29 per ton of 1,000 kilograms, but when contracts are renewed it is very probable that the prices will be seriously increased.

Other cities of this district which use large quantities of coal are

Perigueux, Vierzon, Guéret, Chateauroux, Tulle, and Poitiers; but in these places French coal is used, costing less and being sufficient for the electric lights, tramways, sawmills, etc.

AUGUSTE JOUHANNAUD,
Vice-Commercial Agent.

LIMOGES, *April 11, 1900.*

LYONS.

No subject pertaining to industry and commerce has excited more interest in France during the past year than the question of coal, and the United States, more than any other country, is looked to for the supply necessary to meet the increasing demand. The French consul in New York has increased the interest in this subject by a report to his Government which has been widely reproduced in the press.

Mr. Bruwaërt says that the United States produces more coal than any other country in the world; that the output is 150,000,000 tons of bituminous coal per year and 50,000,000 of hard or anthracite coal; that the average price at the mine is 4 francs ($0.772) per ton.

I translate a few passages:

> It is perhaps on account of this low price, which indicates the mediocre quality that foreign commerce has drawn but very sparsely upon this country for its supply. Of 15,000,000 tons exported during the calendar year 1899, Canada was the only important customer of the United States. That country took 12,500,000 tons, and Mexico 1,500,000 tons. We bought only 2,117 tons in 1897 and 1,554 tons in 1899, without having done any business in this line in 1898. Our purchases were chiefly for coaling our ships.
>
> For some months past, however, the demand from France has been very heavy. It came first from Marseilles, some two or three months ago, without doubt on account of the scarcity caused either by the strikes in England or France, or the Transvaal war. Recently, Brittany, Normandy, and the Department of the North sent a number of orders here [to New York] probably because of the shortage of supplies from England.
>
> From investigations that I have made and from information received at this consulate [i. e., in New York] it is demonstrated that there exist in the United States excellent qualities of coal which answer all the needs of this great country, whose necessities are as varied as ours, and at prices that are generally very reasonable. It must be remembered, however, that this country is passing through a degree of industrial activity that almost exceeds the capacity of the coal producers, who can not fill all orders in the time demanded, nor at the usual prices. Nowhere have I been able to find a house willing to take a contract for immediate delivery at a given price. All ask time to consider before entering upon a contract, and April is the earliest date that they will agree upon. [This was written in New York the first week in March.] They will not name a price even for that time, because the railroads have not yet agreed upon a freight schedule to the seaboard.

I translated the Department circular to a large coal dealer of Lyons, who favored me with a reply to the questions asked, as follows:

LYONS, *April 8, 1900.*

SIR: The astonishing development of the metallurgical industry during the last two years has greatly increased the consumption of coal in and around Lyons. The coal basins of the Loire, the Saone and Loire, of Allier, and also of the south of

France, which feed the Lyonnese district, have become absolutely inadequate, above all in the cold seasons, when the consumption of coal is more than doubled. This shortage is now being supplemented by English coal, the supply of which is very likely to be subject to frequent interruptions, and I believe that American coal would find here a large and continuous outlet, provided that the freight to Marseilles be not too high.

The prices of coal from the various surrounding basins, delivered at the depot in Lyons, are—

Lump coal, household use, 36 francs ($6.94) per ton of 2,200 pounds; unassorted, for household, 32 francs ($6.17) per ton of 2,200 pounds; the same, for mill and factory uses, 27 francs ($5.21) per ton; slack, for mill and factory uses, 24 francs ($4.63).

American coal, being of a superior quality, could, I think, be sold at a higher figure, say from 4 to 5 francs (77 to 96 cents) per ton more than the prices above quoted.

To the first cost of American coal must be added the freight to Marseilles, which will depend much upon the encouragement given by the American Government to ocean navigation. The customs duty in France is 1.20 francs per ton (about 23 cents). To Lyons there will be an additional expense of 2.50 francs (about 47½ cents) for loading, and 15 francs ($2.89) for freight after leaving Marseilles. It is more than probable that freight rates from Marseilles to Lyons will be reduced with the practical opening of the coal trade between the Mediterranean and the United States.

I do not know of any mills in Lyons where United States coal has yet been used, but I have had many calls for it. The Paris, Lyons and Mediterranean Railroad Company received lately from 3,000 to 4,000 tons.

I am convinced that if the freight rates, which are now very high, could be reduced, American coal would find a very important market in all the Mediterranean ports, not only in Marseilles but also in Italy, defying the competition of English coal, which now monopolizes those markets.

Very respectfully, yours, EDOUARD FRANÇON.

It is the general opinion of all coal dealers and coal users in and around Lyons that freights will be materially reduced as soon as it is absolutely certain that large quantities of American coal will be shipped regularly to the Mediterranean. It is believed to be better than English or French coal, though one dealer tells me that it makes more smoke and produces less heat, but not less ashes, than the English product.

A chemical concern in Lyons is daily expecting a small sample of American coal by mail. It will upon arrival be subjected to examination and the results will be duly reported.

In a former report from this consulate[1] it was stated that the Paris, Lyons and Mediterranean Railroad Company had reduced rates on coal from Marseilles to Lyons to $1.64 per ton. This statement must be corrected. At the last moment the railroad company refused to make the reduction.

"The Capitaliste," a financial and industrial paper, contains an article this week on the coal supply, from which I translate briefly:

Figures show that we are now tributary to England for coal. Before the recent coal famine our miners in the south and southeast complained of the competition of

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[1] See Consular Reports No. 236, May, 1900; Advance Sheets No. 684, March 22.

England. Now, it is certain that those producers could not supply the demand if no coal were received from England. There should then be no complaints of the competition which, in a crisis, renders us such services. * * * America is now striving to enter the European markets, especially by way of the Mediterranean, in competition with English coal. Thus, in 1899 Barcelona received 2,213 tons from the United States, and Genoa 16,438 tons. * * * It is reported that a steamer recently sailed from Newport News freighted with 5,000 tons of Pocahontas coal for Alexandria. * * * It is whispered that the Paris, Lyons and Mediterranean Railroad Company have contracted for 75,000 tons of American coal. * * * In another quarter it is said that 160,000 tons of American coal recently left Norfolk for Europe. * * * If we add to this that the coal company to which the Paris, Lyons and Mediterranean Company applied (the New River) mines 20,000 tons per day, the most improved mechanism being employed, permitting a heavy production at a small cost per ton, it will be understood why the cost is only 10s. ($2.43) per ton in an American Atlantic port, and how American producers can compete with English coal in the Mediterranean.

JOHN C. COVERT, *Consul.*

LYONS, *April 10, 1900.*

SUPPLEMENTAL.

THE WORLD'S COAL SUPPLY.

Monsieur Paul Leroy-Beaulieu, the great French political economist, has published three elaborate articles entitled "The coal question: the near and the distant prospect," from which I translate and abridge.

Monsieur Beaulieu attributes the late rise in price to the strikes and to the increased wages paid to coal miners; to high freight rates on railroads and water routes, caused by a sudden increase in industrial activity all over the world, and the use of a large part of the English merchant marine in the Transvaal war; to the development of the metallurgical industries for the construction of armored ships, and to activity in other fields of industry in which there is a continually increasing use of iron; in a word, to an increased demand and a diminished output, by reason of strikes and the falling off in production, rise of wages, delay in transportation, and higher freight rates on land and water. He says:

> What of the future? Those who remember previous coal famines, especially that of 1874, think that coal will, in two or three years, return to, or very nearly to, its normal price. Others are of the opinion that this rise will continue; that there will be no fall of prices before 1902, and that even then it will be slight. They reason that the supply of coal may be exhausted, but can not be reproduced; that newly discovered mines can hardly replace those that are being exhausted; that consumption must go on increasing; that the new countries of supply—the United States, Japan, and, before long, China—are very far away.

The writer expresses the opinion that there will be a fall in the price of coal within the next eight or ten years; that within a year or eighteen months the price is more likely to decline than to remain as at present, but that prices will be long in returning, and will perhaps never return to the low rates of five and six years ago.

Monsieur Beaulieu quotes Mr. Ed. Lozé, who in his work entitled "English coal and its exhaustion" gives the following figures of the output for 1897:

	Tons.
England	205, 182, 000
United States	181, 500, 000
Germany	91, 000, 000
France	30, 780, 000
Belgium	22, 500, 000
Hungary	11, 500, 000
Russia	11, 000, 000
Spain	1, 940, 000
Other countries	19, 130, 000
Total	574, 532, 000

The writer thinks the output now must be 650,000,000 tons, of which the United States produces 200,000,000 tons. Monsieur Lozé reaches the conclusion that if the coal consumption continues to increase as in the past, Great Britain will by the end of 1950 have produced 14,500,000,000 tons, and that Great Britain's exceptional advantages will disappear between 1950 and 1960.

Monsieur Beaulieu thinks, however, that she will continue indefinitely to be an important coal producer. He regards it as impossible to limit the working of English mines to a depth of 2,000 feet, as "in France mines are worked down to 2,500, 3,000, if not 3,600 feet."

In his second article, Monsieur Beaulieu reiterates the opinion that as there was a fall in prices after the rise of 1875 and of 1890, so there will be a decline within the next eighteen months, though there may not be a return to the low figures of 1895-96. He adds:

> As to the more distant future—a quarter, a half, and, for still stronger reasons, a century—the outlook for western Europe is much darker. It is certain that the coal deposits in that quarter of the world tend toward exhaustion, and although new deposits outside of western Europe, as we shall see, are known and will some day be worked, it is clear that one of the causes of the prosperity of western Europe, especially that of the British Islands, will gradually diminish, and that even as far as the whole world is concerned, the production of coal can not follow indefinitely the demands of consumption if they should continue to increase as they have during the past half century.

Monsieur Beaulieu copies the following table of the probable population and estimated coal product of the United Kingdom:

Years.	United Kingdom population.	Coal production in the Kingdom.	Coal exportation and foreign transports.	Home consumption.
		Tons.	*Tons.*	*Tons.*
1900	40, 613, 047	211, 325, 456	51, 357, 225	159, 968, 231
1910	43, 691, 716	243, 140, 629	62, 803, 196	180, 337, 433
1920	46, 602, 931	269, 316, 732	74, 888, 456	194, 428, 276
1930	49, 684, 348	295, 080, 236	87, 075, 726	218, 004, 510
1940	52, 025, 359	322, 532, 297	99, 158, 834	223, 373, 463
1950	54, 522, 071	349, 876, 593	110, 202, 548	239, 674, 045

Monsieur Beaulieu thinks the population not likely to increase in the proportions indicated above. Instead of 54,000,000 in 1950, it may be that the population will number 47,000,000 or perhaps less. On the other hand, there is no reason to believe that the coal production of Great Britain will increase from 211,000,000 to 350,000,000 tons. He says:

> We are convinced that it will develop much more slowly. The first figure, 211,000,000, is too high for 1900. We do not believe the product will be over 206,000,000 or 207,000,000 of tons. By referring in the Statistical Abstract of 1899 to the figures giving the production in Great Britain from 1890 to 1898, we see that that production passed only from 181,614,288 tons in 1890 to 202,054,516 in 1898. This is an increase of 20,500,000 tons in eight years, or 2,500,000 tons per year. The same yearly progression would give about 330,000,000 tons in 1950 instead of 350,000,000 tons, as estimated by Monsieur Lozé.

Monsieur Beaulieu thinks it probable that the coal mines of England contain twice or three times the 14,500,000,000 of tons which are supposed to lie above a depth of 610 meters, about 1,900 feet. He therefore estimates the coal contained in British mines at 30,000,000,000 or 40,000,000,000 of tons. Supposing the quantity mined would amount to 240,000,000 tons per year, there would be a supply for one hundred and thirty to one hundred and sixty years.

The following table of the coal resources of the world is copied from Monsieur Lozé's work.

Countries.	Surface in square kilometers.	Square miles.
China	600,000	231,660
United States (not including Dakota and the States and Territories of the Rocky Mountains)	517,980	199,992
Canada (east of the Rocky Mountains)	168,340	64,996
British India	91,940	35,498
New South Wales	62,160	24,000
Russia (not including Siberia, central Asia, and Caucasus)	51,800	20,000
United Kingdom	30,820	11,900
Spain	14,244	5,500
Japan	12,950	5,000
France	5,386	2,080
Austria-Hungary	4,636	1,790
Germany	4,584	1,770
Belgium	1,320	510
Total	1,566,080	604,696

He continues:

> From the above table, it will be seen that the coal area of the world extends over a space just three times as large as France and fifty times as large as the coal beds of Great Britain. When we consider that these figures do not include the Rocky Mountains in the United States and Canada, or Siberia, Central Asia and the Caucasus; if we add that Africa is not mentioned, although coal mines have been worked there for some years and the mines of the Transvaal and of Natal produced over 2,000,000 tons in 1899; that our Tonkin is omitted, that Central and South America do not figure at all, and that the exploration of the world will probably result in the discovery of other mines, it may without exaggeration be estimated that the coal area of the world is not less than 2,000,000 square kilometers (772,200 square miles).
>
> At present, it is possible that the coal mines worked do not cover an area of over 100,000, perhaps not even 100,000 square kilometers (38,610 square miles).

In his third and last paper on this subject, Mr. Beaulieu asserts that the question of coal is not alarming unless we confine our attention to Western Europe; that if the coal beds of the West should within forty or fifty years be worked with greater difficulty or become exhausted in a century and a half, no such apprehensions need be entertained in regard to the coal mines of the world. There is a sufficient quantity in the world for ten centuries' consumption. The development of the mines of Japan, China, and Siberia will be important factors, not only as concerns local consumption, but also for coaling the commercial fleets which plow the Chinese and the Indian seas. The result will be that England will be called upon to send less and less coal to that part of the globe.

The following table, given by Mr. Beaulieu, shows that the importation of coal into the Indies is rapidly decreasing:

	Tons.
1895	808,983
1896	746,850
1897	481,036
1898	248,054

The United States and China, he says, are the countries best provided with coal. China has 600,000 square kilometers (231,660 square miles), the United States 518,000 (200,000 square miles), without counting Dakota and the Rocky Mountain States, and Canada has 168,000 (64,865 square miles). Combining Canada with the United States there is an area of 686,000 square kilometers (264,865 square miles), while England has only 30,000 square kilometers (11,583 square miles). North America in the matter of coal is an incomparable country. The writer continues:

> There are American coal mines which are near the ocean, the Great Lakes, or navigable rivers. Railroads are built to transport coal at excessively cheap rates—1,100 kilometers (683.5 miles) for 10 francs ($1.93) per ton. Freight from America to the Mediterranean is high, generally not less than 15 francs ($2.90) per ton, sometimes falling to 10 and 12 francs ($1.93 and $2.32). At the mouth of the mine the price of coal is seldom over 7 and 8 francs ($1.35 and $1.54) per ton; it often falls lower. From these facts it may be concluded that American coal can be laid down in the Mediterranean ports at from 30 to 35 francs ($5.79 to $6.76) a ton. Probably when this trade, which is absolutely new, is well organized, it will be sold in the Mediterranean for 25 and 28 francs ($4.85 and $5.40), if not lower.
>
> When we lift our eyes from the little countries of Europe and contemplate the world as a whole, when we consider the new and the coming coal fields, we are convinced that the world is not nearing an exhaustion of that combustible, and we conclude that the great rise in coal during 1899 will undoubtedly be of but little more duration than the previous high prices of 1875–76 and 1890–91, though it is possible that the low figures of 1895 and 1896 will not be reached. But a small deficit is necessary to raise the price. The total world's consumption reaches from 650,000,000 to 700,000,000 tons. A small deficit of but 3 or 3½ per cent may double the price. But as there is an increase of from 3 to 3½ per cent in production, a great increase in price from that cause is not probable.

Mr. Beaulieu concludes his study by citing the substitutes for coal, not referring to petroleum, because it may be threatened with failure of supply, as with coal. He mentions electricity, supplied by hydraulic force, capable of developing enormous resources. He recently learned that in the south of France an industry which consumed 20,000 francs ($3,860) of coal per year is substituting electric force from a waterfall 15 kilometers (9⅜ miles) distant. He thinks that recourse will be had to hydraulic force in the region of the Pyrenees, the Alps, and the Vosges. Acetylene may diminish the use of coal, and the march of progress will bring other substitutes.

JOHN C. COVERT, *Consul.*

LYONS, *June 7, 1900.*

MARSEILLES.

Continuing my various reports concerning the introduction of American coal into Europe,[1] beginning about one year ago, and replying particularly to the Department's circular of March 10, I submit herewith a translation of a very interesting letter from the head office of Worms & Co., at Paris, to the branch house in Marseilles:

PARIS, *March 30, 1900.*

Messrs. WORMS & Co., *Marseilles.*

GENTLEMEN: We return to you a copy of the report of Mr. Skinner, the American consul at Marseilles, concerning exportations of American coal, together with various documents, which we shall be glad to have you send to him for his information. We should add that all these newspaper articles contain some inexactitudes.

The facts of which we have up to the present time actual knowledge concerning the operations of American coal in France are the following:

One cargo of 5,000 tons of New River coal, contracted for by us for delivery at St. Nazaire, to the Paris Orleans Railway, the ship to arrive toward the end of April.

The cargo already reported by Mr. Skinner, of the *Inca*, to which should be added 40,000 tons of New River coal for delivery before the end of the year, to the Paris, Lyons and Mediterranean Railway Company at Marseilles. You are aware that the *Mora* carrying our second cargo should arrive within a few days.

A quantity of 10,000 tons of "Eureka" coal, arranged for by another house than our own, for delivery to the same railway at Marseilles.

As you know, the Paris, Lyons and Mediterranean Company would now like to try the Pocahontas coal, of which no purchase has yet been made; but the representatives of this coal do not appear to be able to procure the tonnage necessary for the transport.

It may be that other sales have been made in France; but if so, we know nothing of them, and we doubt whether any considerable transaction, except as above stated, has taken place.

We have had ourselves many demands from consumers—railway companies, navigation companies, manufacturers, etc.—in France and in Holland, but most of them seem to have thought that one could obtain American coal delivered in Europe at prices much lower than those which prevail, and up to this moment the matter of cost has caused these inquirers to retire, or at least to hesitate.

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[1] See Consular Reports Nos. 221, 223, 224, 234, and 235 (February, April, and May, 1899; March and April, 1900) and Advance Sheets Nos. 292, 336, 394, 648, and 661.

However, we are about to deliver more or less important quantities for testing purposes to certain manufacturers in the south and west of France, which we will procure from our importations at Marseilles and St. Nazaire.

Our opinion conforms to that expressed by the Economiste (French), which we send to you, and is that American coal will succeed in planting itself and in remaining for a period of more or less duration in the Mediterranean, where it can compete with English coals, which have to support a freight ranging from 9s. to 16s. 6d. ($2.19 to $2.79) per ton, but only under exceptional circumstances can it arrive in the ports of the channel and the north of Europe, for which the freights from England vary from 4s. (97 cents) to 6s. ($1.46) or 7s. ($1.70) per ton, figures so low as to remove the probability of competition. We ourselves incline to the belief that when necessary, the American miners will reduce their prices at the ports of embarkation to favor the export trade, and, furthermore, that when a movement of coal shall have been created between the United States and Europe, the freight rates thereon will have a tendency to lower.

It may be interesting, perhaps, for Mr. Skinner to know that the Compagnie Messageries Maritimes has used New River coal for two years in its depot at Rio de Janeiro, where during the period named we have forwarded 17,000 tons of this coal, and at present we are making regular shipments for the same company.

In his report, which we return to you, Mr. Skinner speaks of the use of petroleum for navigation, and on this point he is perfectly informed. The enterprise is in the hands of our friends, Messrs. M. Samuel & Co., of London (The Shell Transport and Trading Company, Limited), who already have established depots at Suez (in our hands), Kurrachee, Madras, Calcutta, Penang, Singapore, Bangkok, Hongkong, Shanghai, Kobe, and Yokohama, and in the near future will complete their series of depots in the Mediterranean and in Great Britain, in such a manner as to enable ships to find everywhere upon their route between the port of departure and the port of arrival sufficient provisions of liquid fuel to supply their wants. Several ships of the Hamburg-America Company, of the Hansa Company, and of the Rotterdam Lloyd are to be installed so as to employ this new combustible, and the day is not perhaps far distant when the Peninsular and Oriental and the Compagnie des Messageries Maritimes will also make tests.

You may communicate the present letter to Mr. Skinner, in putting us at his entire disposition for the supply of any information which he may wish to obtain.

Receive, dear sirs, our sincere salutations.

WORMS & CIE.

THE QUESTION OF OCEAN FREIGHTS.

The foregoing letter, replete with definite information, and convincing from the fact that it comes direct from one of the most important firms of coal buyers and sellers in Europe, settles effectually any doubt as to whether American coal has actually been sold for foreign consumption, and therefore brings into the foreground questions of ways and means of retaining and increasing the hold on the market already obtained. American coal thus far landed here paid a freight rate at first reported to be $3.65, but now generally understood to have been rather over those figures. Mark's Review, of Cardiff (March 24), notes two Marseilles charters at $2.70. The real difference, then, between the two rates is not less than $1, and as ocean freight rates rise and fall with some degree of harmony, it may be said that American coal must depend upon economies in land transportation and handling to overcome the odds against it in ordinary times. Whether ordinary times will ever again be experienced is an interesting problem, for looming up in the future is the possibility that Great Britain may have no surplus coal to sell and that oil may be substituted for coal as fuel.

The initial cost of mining in the United States is considerably less than the mere difference in ocean freights between Cardiff and the Mediterranean and between America and the Mediterranean, and is unlikely ever to seriously change the situation. Any fluctuation in the cost of labor, even though measured by a large percentage, would be trifling in fixed amount. The effective blow to strike, then, would seem to be to create and operate fleets of steamers such as we have on the great lakes for our ore and grain trade, owned, if possible, by the coal or land transportation companies, whose owners would have no middlemen's commissions to pay, and who might be willing to carry coal at cost or thereabouts, reimbursing themselves from the profit on their merchandise. British ships go empty to Cardiff for coal delivered here for $2.30, and often considerably less, and net 5 and 6 per cent for their owners after providing for depreciations. These are usually moderate-sized vessels in general trade. Large American cargo boats could doubtless be operated much more economically, and would burn cheaper fuel on their outward trip.

However, we must face every side of the proposition, and admit with Messrs. Worms & Co. that we can not expect to put down our coal in the Mediterranean at prices materially below those charged for the British product. At present, and certainly for some time to come, we can sell coal if we can get the tonnage. There has been no substantial break in the Cardiff market for months, and there is indeed every reason to suppose that government and other contracts will influence a small rise. When tonnage is less scarce, we can probably stand here on equal terms with Great Britain; but with tonnage hard to find, and mainly British at that, it is more likely to favor British interests than our own. Precisely for that reason one lot of 75,000 tons of American coal can not be moved to a French purchaser desirous of having it.

THE MARKETS TO BE OBTAINED.

Granting that we are prepared to do business in France, we have first to study the possible demands for our product. In Marseilles, the trade most to be desired is that of stocking or "bunkering" ships. For domestic purposes France has domestic coal, not equal to British or American coal, but still fairly satisfactory. Interior transportation is expensive. A French statistician who protests because the

Paris, Lyons and Mediterranean Railway refuses to allow a rate on coal of .002895 cents (slightly less than the current rate), remarks with something like astonishment that American coal is transported per kilometer (equal to 0.621 miles) at .001351 cents. Under the system of discriminating tariffs which foreign competing coals would find in France, it would be practically impossible to do anything far in the interior, unless, as was the case during the strikes this year, local supplies were exhausted and temporary advantages asserted themselves. Even at the seaboard, there is little difference in the selling prices of English and French coal, although the English is unquestionably better in quality and more to be desired from every point of view. Notwithstanding this circumstance, most French shipping companies, being subsidized by the French Government, fill their holds with French coal, that being an implied feature of their contract insisted upon as a measure of self-protection and national defense. Until the new iron and steel works now being erected at Cette are ready for operation, the only really important buyer of coal free to secure it in the open market is the Paris, Lyons and Mediterranean Railway Company. Before going into the consideration of the bunker trade, I should mention that for general purposes Italy is the most promising country for our exports, as no Italian coal is produced and all industries depend upon imported fuel.

The bunker trade of Marseilles is virtually in the hands of four firms.[1] These firms make a syndicate price for bunkering each year, and bind themselves to sell to contracting shipowners through the business year at that price. The present syndicate price of 25s. ($6.07) was made before the raise, and these four firms have since been providing their buyers with fuel at a heavy loss, while shipowners not under contract are paying them to-day 35s. ($8.51) for the same article. Such new contracts as are now being made are written at 35s., but with the market in its present state, it may be said that dealers have little disposition to obligate themselves very far in advance at the price named.

During the years 1898 and 1899, the net gauge of all ships entering and clearing Marseilles was as follows:

	1898.	1899.
	Tons.	*Tons.*
French	6,332,051	6,786,221
British	2,987,057	3,031,470
All others	2,674,384	2,773,047
Total	11,993,492	12,590,738

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[1] Watson & Parker, Rue Beauveau 8; Worms & Co., Rue Beauveau 16; Savon Frères, Rue de la Republique 25: Société Commerciale, Rue Suffren 2.

Meantime, importations of British coal at the port of Marseilles developed as below:

Year.	British coal for interior consumption.	British coal for navigation.	Totals.
	Tons.	*Tons.*	*Tons.*
1889	56,107	190,704	246,811
1890	58,879	259,619	318,498
1891	110,783	345,372	456,155
1892	128,156	293,348	423,604
1893	130,578	298,593	429,171
1894	137,532	357,836	459,368
1895	165,369	353,209	518,578
1896	187,385	385,462	572,847
1897	202,642	459,777	662,419
1898	178,332	467,563	645,895
1899	385,363	142,696	828,059

During the year 1898, the local bunkering trade absorbed 176,414 tons of French coal. Figures for 1899 are not available.

FRENCH NAVY CONTRACTS.

The French navy and subsidized ships burn French coal, for which the boiler grates have to be adjusted, as it is almost exclusively employed in the form of briquettes. A constant stock of 10,000 tons of briquettes is kept on the docks in this city for the navy. Mr. Jouve, the consular agent of the United States at Toulon, informs me that the French Government contracts are made for one year, and always at Paris. Purchases of about 80,000 tons are made, and the price is not official, but varies with each contract. Mr. Jouve also says that the Toulon Gas Company consumes 15,000 tons annually, half English and half French. At the great shipbuilding works near Toulon, French coal only is used.

FRENCH COAL MINES.

The best French coal is mined in a region remote from Marseilles. In this department, within a radius of 40 miles from the city, considerable quantities of lignite are mined, 2,237 operatives finding employment in the mines. The production of these mines in 1898 was 447,460 tons, and the average price of the coal at the mines during the year 1898 was 8 francs 88 centimes ($1.71). The conditions of labor can scarcely be compared with those prevailing in the great mining regions of the United States. The mayor of Gardanne, the center of the industry, informs me that the miners receive 2 francs (38 cents) per ton in the large mines, and from 4 to 5 francs (77 to 96 cents) in the small openings, which cater to neighborhood trade.

HOW CONTRACTING IS DONE.

British shipping entering Marseilles is mainly covered by coal contracts, and the best French companies not bound to burn French coal by subsidy limitations make the same arrangements. The only ships free to buy in the open market at current prices belong to comparatively insignificant lines. The contracts for coaling this vast amount of shipping are generally made in London by great exporting firms, and they arrange to supply coal, not at one port, but at all coaling ports where ships are likely to call. The Marseilles sellers of coal, who not only deal in fuel, but act as ships' agents for the transaction of local business and the finding of return cargoes, make their arrangements with these British middlemen in London, being all to a greater or less extent mutually interested in the mining, carrying, and selling of coal, and the manipulation of the cargoes which bring shipping into existence. Thus it is easy to see that, other things being equal, the American mine owner, from whom I am receiving letters by every post, and who hopes to secure orders by quoting f. o. b. prices at Newport News, is checkmated by British syndicated interests. Transportation companies, even for the sake of saving a few shillings per ton, can not afford to buy coal at Newport News and hazard its delivery within a given period, or even to contract at a favorable price for the city of Marseilles alone. They must know long in advance that they will find at every port of call a sufficient stock to meet their requirements. Furthermore, share owners in coal companies and transportation lines naturally prefer to sell their own coal to their own ships, and their organization, through which they quote prices in London for any port in the world, is so complete that foreign navigation companies also find it advantageous to deal in London in the same way.

Of course, this all presupposes approximately even terms for British and American coals. Could we come into the European market with prices materially lower than the British, the situation would be altered. Thus, in the crisis of this winter, with coal difficult to find on any terms, the British were glad to buy our coal, and I am told that American coal was actually delivered in Newcastle, but the business transacted was mainly written in London, and the most important effect of unexpected American competition was to bear down Cardiff prices, which threatened to reach an absurdly high figure. For this, if for nothing else, Europe owes to the United States a debt of large proportions.

THE PERMANENT CURE FOR DIFFICULT CONDITIONS.

The permanent cure for a condition so disadvantageous to our coal merchants is to rebuild our merchant marine. Give to the United States ships calling regularly at a chain of foreign ports, and at once the exporting trade in New York will find it unnecessary to pay commissions to the several foreign middlemen now standing between the miner and the consumer. But even American ships will have to overcome some natural disadvantages by artificial support, at least until the business balance readjusts itself in this portion of the world.

British ships from the Mediterranean to England aim to have outward and inward cargoes. Leaving England, they can always carry coal. Thus, until recently, British coal monopolized the South American markets; although from its geographical position, the United States should have done so. Now, from Marseilles, during the year 1899, 126 ships were cleared for American ports, of which 47 left in ballast and 79 with cargo. It is a rare occurrence for a ship to leave completely filled, but, on the other hand, of the 47 leaving in ballast, a considerable number called at other ports for immigrants or part cargo. These ships, every one flying a foreign flag, all returned loaded down with our products, and a great many more than 126 ships discharged American cargo in Marseilles and had to clear for other than American ports in order to avoid a return voyage with absolutely nothing. An American ship has not been seen in this port certainly for five, and probably not for ten, years. With light cargoes for America, and with shipping from America always in demand for our raw or manufactured products, coal, which requires a low rate, has difficulty in finding it. As the case stands, we are furnishing the business for foreign shipping, and incidentally to a large extent paying the wages of British miners of coal. As soon as we are prepared to make the sacrifice necessary to reestablish our merchant marine, we shall save for distribution among our own people not only the amount now annually paid out for ocean freights, but we will develop our inexhaustible beds of coal and secure a permanent and profitable trade.

CRITICISMS OF AMERICAN COAL.

Returning to matters of fact and detail, it may be said that the experience now being gained will be a powerful aid to the greater future for the trade which can be foreseen. The American coal thus far delivered in Marseilles is criticised as being extremely small, its compensating wealth of component parts not being apparent to the eye. This coal was brought here under contract with the Paris, Lyons and Mediterranean Railway Company, at a price of $6.80 per ton c. i. f. Marseilles, landed weight, with a guaranty of 20 per cent to 23 per cent of volatile matter, 4 to 5 per cent of ash, with a right of refusal if ash exceeded 6 per cent; the coal not to contain more than 30 per cent of small, as tried on a screen of 30 millimetres, at an angle of 45 degrees; 600 tons a day delivery, payment at thirty days' date from the end of the month of delivery at Marseilles. The contract itself is a very much involved document, setting forth conditions generally regarded as impossible of fulfillment. The pro forma contract of the Paris, Lyons and Mediterranean Company has never been enforced to the letter, and the company is regarded as an agreeable buyer when sellers endeavor to meet reasonable requirements in good faith. At all events, this American coal was accepted, and the remainder of the lot of 45,000 tons is coming forward. Exporters should be made aware of this prejudice against small coal, however, and should guard especially against cause for criticism during the first years of the business.

Cardiff coal is large—larger, it would seem, than is required for any practical purpose. It arrives in Marseilles much in the state in which it is mined, and the large lumps are utilized in building retaining walls, 14 feet high, around the huge piles which line the docks for a quarter of a mile. This Cardiff coal is loaded into ships with considerable care, from railway cars of 10 tons capacity, and entire carloads are not always dumped direct into the holds until the latter are in part filled and the height of the fall thus reduced. I am informed that with American coal, an ordinary practice is to shoot entire carloads into vessels, and as our cars frequently have a capacity of 40 tons instead of 10, and as the coal itself is probably more friable than the English, the result is disastrous to the appearance of the merchandise, especially from the European point of view. An observer of American and English coals, as laid down here, would conclude that the American was extracted with a minimum of hand labor and a maximum of powder, and the British with no more powder than necessary to loosen the vein.

ANALYSIS OF BEST CARDIFF COAL.

The analysis of "Nixon's Navigation," which is considered the first quality of Cardiff coal, gives the following results: Humidity, 0.15; volatile matter, 12; fixed carbon, 84.30; ashes, 3.55—equals 100; calorific power, 8,230 calories. In an industrial test made in Marseilles by the Association des Appareils à Vapeur, at the shops of the Compagnie Générale Française de Tramways, this coal recently gave the following results:

Vaporization in liters of water (at the temperature of alimentation) per kilogram of coal.

	Gross carbon.	Pure carbon.
First test	10.36	11.27
Second test	9.52	10.43

This analysis and these tests had to do with coal of extra quality. Good ordinary Cardiff coal gives 12 per cent to 15 per cent of volatile matter, 4 per cent to 6 per cent of ash, and 7,500 to 8,000 calories.

PORT CHARGES AND INLAND PRICES.

In a former report[1] I explained that the necessary charges for coal intended for the bunker trade amounted to 86 cents per ton, this including the cost of discharging, custom-house statistics, lighterage, and incidental expenses. For the inland trade these charges amount to $1.07 per ton, including a tariff of 23 cents and charges for statistics, discharging cargo, cartage, and incidentals. At the present time, Cardiff coal for inland trade is quoted at $8.68 for large, $6.17 for small; Newcastle coal at $6.75 to $7.72; French smithing coal, first choice, from the Loire, is quoted at $9.65, second choice at $8.68, coke, $9.65 to $8.68. Ordinary French coals from the departments of Gard and Bouches du Rhône bring from $5.79 to $7.33. I should say that these published prices for French coal were considerably over those actually obtained. French coal for navigation must pay port charges equal to those estimated for foreign coals.

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[1] Advance Sheets No. 336, January 28; Consular Reports No. 221, February, 1899.

I have heretofore referred to Schneider & Co., of Creusot, as large consumers of coal. This is the great iron and steel concern of France, employing something over 12,000 men directly, and the same firm is now building extensive furnaces some miles west of this, at Cette. My conviction is that this is for the double purpose of securing Government contracts and cheaper fuel and ore than can be obtained in the interior at Creusot.

My information from Cette is as follows:

The house of Schneider & Co., of Creusot, have manifested the intention of creating in our port blast furnaces and yards for naval construction. This work has scarcely been commenced, and it will probably be about a year before the furnaces are completed. Until the present time, Messrs. Schneider & Co. have used nothing but French coal, but the greatly diminished quantity procured from the mines at which they have heretofore been served, leads to the prevailing opinion that these gentlemen will be obliged to import their coal sooner or later. According to many authorities, this is precisely the reason why our port has been chosen for the new works. However this may be, these works will occasion an annual importation of 300,000 tons of merchandise and an annual consumption of about 100,000 tons of coal.

At this moment Cardiff steam coal (not the best) is worth at this port 40 francs ($7.72) per ton, including a freight of from 10 to 11 shillings ($2.43 to $2.67). French coal varies from 35 to 38 francs ($6.75 to $7.33) per ton, delivered in the depot at Cette. Although the moment is badly chosen in which to judge of prices, we can say that in ordinary times Cardiff coal sells at from 4 to 5 francs per ton more than French coal, and because of its quality, is considered cheaper at the higher price than the French product. Comprised in this selling price of 40 francs is the commission of the local representative or agent, which is perhaps 4 or 5 francs (77 or 96 cents) per ton.

At the present time no coke is imported into Cette, and domestic coke is worth from 30 to 35 francs ($5.79 to $6.75) per ton at the coke ovens. The only coke on sale is that produced by the gas works of the city, which yield from 4,000 to 5,000 tons annually, of which 3,000 tons are marketed in Cette.

Respectfully,

L. S. NAHMENS,
Consular Agent of the United States at Cette.

FROM THE GREATEST PRIVATE CONSUMERS IN FRANCE.

I also have had a letter from the firm of Schneider & Co., doubtless the largest consumers of coal in France, railway companies excluded, a translation of which I submit:

LA CREUSOT, *March 24, 1900.*

ROBERT P. SKINNER, Esq.,
Consul of the United States of America, Marseilles.

SIR: We have had the honor to receive your letter of the 19th, making different inquiries on the subject of fuel, questions intended to facilitate the sale in France of American coal and coke. Our own mines furnish to us a part of the fuel required for our consumption; we buy the rest at mines near our establishments in Creusot, in the basin of the Loire, the Nord, and the Pas de Calais. Until now we have never employed anything but French coals. In September of last year, however, we did buy a small quantity of English coal, now being delivered to us. This constitutes our first purchase of foreign coal for almost seventy years, during which our Creusot works have been in operation. This purchase, however, is not important and was destined to complete the tonnage which a friendly company had contracted to supply to us within a fixed time, and which the said company had been unable to do with its own product because of temporary difficulties. Our works at Cette are not yet completed, and the date of their operation depends upon many circumstances. As we still have much time during which to occupy ourselves with the question of supplying these works with fuel, we are not able at this date to indicate to you our decisions. We will return to that question later.

One can procure, generally speaking, throughout France, the coals and cokes necessary for metallurgy of good quality. We manufacture ourselves nearly all the coke necessary for us. We sell a part of the coal that we mine and we are at the same time sellers and buyers. Thus we find ourselves in a special situation which renders it very difficult for us to reply to your questions as to the elevation in prices and the advantages and disadvantages that we recognize in the possible introduction into France of coals from the United States. We ourselves have still some old contracts closed before the present rise in the market and having a certain time yet to run.

The cost of transportation by rail from Marseilles docks to our establishment at Creusot is about 16 francs 45 centimes ($3.17) per ton. In shipping by water from Port St. Louis de Rome to Bois-bretoux, our port upon the Canal-du-Centre, thence by our own lines to Creusot, we would gain about 2 francs (38 cents) per ton on the price above mentioned.

We employ combustibles of every description, anthracite coals and free-burning smith coals, from inferior qualities to qualities of first choice, presenting every possible variation in amount of ash and volatile matter. Consequently, we can not supply an analysis that would serve as a basis of calculation. You will note from the preceding, we are persuaded, that our situation is most peculiar. En résumé, we employ every species of fuel required for the iron and steel industry and until this time have consumed French coals exclusively, apart from the purchase of English coal before mentioned.

We had thought to obtain for our own information details concerning the qualities and prices of American coals. However, a preliminary and superficial examination of the question has demonstrated to us that it would be difficult to count upon that source of supply because of the rate of freight, which must always remain relatively high, between the United States and Cette or Marseilles. But be this as it may, we are now disposed to examine the possibility of securing American coal, not only for consumption in our works at Cette, when the latter shall be in operation, but also for consumption in our establishments at Creusot at periods when, by reason of certain contingencies, our stocks should fail us. We should be happy if the study of the interesting question which you have taken in hand should terminate by placing in our hands from your compatriots propositions to supply coal for metallurgy, delivered franco bord in the United States, and delivered at the ports of Cette, of Marseilles, or of Port St. Louis de Rome. You will find us always disposed to take such propositions into serious consideration.

With our thanks in advance, receive, dear sir, the assurance of our consideration.

SCHNEIDER & CIE.

Replying directly to the inquiry of a Pittsburg correspondent, I should say that no coke is imported into Marseilles, and comparatively little manufactured in France. The difficulties in the way of transporting coal from America are, of course, still more prominent in the case of coke, as that product is considerably more bulky than the other.

WHAT FOREIGN WRITERS SAY.

In their letter to me, with which I have begun this report, Messrs. Worms & Co. make mention of a number of inclosures, which, while for the most part very long, contain no very important facts not already known. The central committee of the collieries of France, in its circular No. 1853, dated March 3, estimates at 160,000 tons the quantity of American coal which will be loaded at Norfolk, Va., for Europe during March and April. The committee divides the cost of the coal sold to the P., L. and M. Railway as follows: Price per ton at the mine, $2.41; land transportation of 389 miles to Newport News, 91 cents; ocean freight to Marseilles, $3.61; total, $6.93. It will be recalled that the prevailing price for bunkering in the city is now $8.51 for best Cardiff. This same circular says that while the freight from Newport News to Alexandria for a shipment is $4.25, the average for the year 1899 from Newcastle to Alexandria was $2.43, and is actually $2.67. The circular mentions with admiration the vast extension of the American producing interest and the economies resulting from the aggregation of these interests. It concludes—

> It is therefore to be foreseen that the trusts, which are already constituted between the collieries and the railway companies, will soon be extended to the companies of navigation. The commercial movement which has now begun will increase rapidly by reason of the exceptional facilities resulting from this solidarity of interest in lowering the above-stated figures for Atlantic freights.

Another French writer, Francis Laur, writing to L'École des Mines et de la Metallurgie, issue of March 15, reviews much more coldly the prospects of American coal. M. Laur says in conclusion:

> As to the quality, that of American coals is notably below that of the coals of Cardiff, which remain preeminent. The facts for American bituminous coal, set in a dozen words in so far as they concern the English situation, are these: Same price, inferior quality, freights very uncertain. One may conceive that in a critical moment, in an hour when one can form no conception of the future of the coal market, a company like the Paris, Lyons and Mediterranean, obliged to assure itself by some tens of thousands of tons against any new event in the market, might

conclude a decoy contract. But it is entirely improbable that these commercial relations can continue in normal times. At the least reduction in English prices America will be ruled out of the market. This first operation (with the Paris, Lyons and Mediterranean), then, will probably have no to-morrow.

In its issue of February 24 the Statist, of London, notes that its prediction of two months previous—that the United States would soon be supplying coal to Europe and South America—has been actually realized. It says:

> At the present moment we are informed that good bunkering coal can be obtained at from 8s. to 9s. ($1.94 to $2.19) per ton at American ports and that the best shipping coal can be obtained at from 10s. to 11s. ($2.43 to $2.67) f. o. b. No coal is obtainable now in Great Britain at any such figures. The cheapest just now is Scotch, which is not suitable for all markets, and costs 15s. 6d. ($3.77) f. o. b., whilst Northumbrian steam costs 18s. 6d. to 19s. ($4.50 to $4.62), and best Cardiff 25s. to 26s. ($6.07 to $6.32). * * * Welsh coal is undoubtedly too high, and will have to come down before the competition of Northumbrian, Scotch, and American coals, and the exports of American coal will have a wholesome effect in teaching Welsh coal owners and colliers that best Cardiff is not the indispensable which the world must have at whatever price the producers choose to put upon it. But the large contracts which have been made in England and Scotland at about current prices, both on home and foreign account, for deliveries over the year must have a large effect in sustaining for some time to come the prevailing high prices. As a general countercheck to further advances we have the American supply, which month by month may be expected to go on increasing, and we are among those who believe that American coal has come to stay.

EUROPE EXPECTS AMERICA TO SUCCEED.

From all of the foregoing, my own conclusion is that if we seriously take up and study the question of coal export, as we have studied out processes for reducing the cost of iron and steel, by eliminating the half dozen commissions which under existing circumstances must go out to middlemen, we shall not have to retire from the market, in spite of the several difficulties to be overcome. In the export trade Great Britain has no competitor except the United States, and no hope of any new competitor exists, unless, possibly, Abyssinia should come into the market. It is reported that within recent months the Negus Menelik II gave orders to his chiefs to assemble at Addis-Ababa samples of all the "black stones" that could be found in the Empire. An investigation followed, and as a result several specimens of coal were discovered, and the opening of mines is remotely discussed.

But with one railroad and one seaport, Abyssinia is unlikely to be heard from during the present decade. Europeans themselves seem to feel that American enterprise knows few bounds, and that with illimitable coal areas to draw from, the mere matter of a thousand or so more of miles of ocean to traverse than our nearest competitor will not be permitted to permanently interfere with the expansion of our exports of coal.

ROBERT P. SKINNER, *Consul.*

MARSEILLES, *April 3, 1900.*

SUPPLEMENTAL.

COMPLAINT CONCERNING AMERICAN COAL.

I am in receipt of the following letter, which voices a very common criticism throughout Europe of American coal. I find that many persons who are disposed to regard American coal as vastly inferior to the British article because of the alleged excess of fine coal and dust have obtained their information by hearsay; and there is, of course, a considerable party prepared to make use of every trivial criticism to condemn our whole product. It may be useful, therefore, to our miners and exporters to learn what is being said upon this side, in order to guard against any well-grounded cause for complaint. My letter is as follows:

St. Petersburg, *May 7, 1900.*

Robert P. Skinner, Esq.,
Consul of the United States, Marseilles.

Sir: The lively interest you are good enough to take respecting the import of coal from your country into Europe induces me to report to you the experience I have had in my endeavor to promote trade in this section. Thus far, I am sorry to say, I have been unable to induce any of our importers to seriously attempt a purchase of American coal, because of the weak and brittle quality of the same. They say, as far as they know it, American coal is so soft it will crumble to pieces on the merest contact. Being from the beginning shipped with an unreasonable quantity of dust, the latter so increases during discharge and delivery, on account of the coal's brittle nature, that it becomes overwhelming in quantity and nearly doubles the price of the coal, as the large quantity of dust in this country is quite useless and a heavy burden, causing freight, duty, and labor.

This being the case, I think that the principal thing is to find such portions of your country and such particular mines as deliver a hard, durable coal, same as English and Scotch coals, and not beset with much dust. Unless this quality can be obtained, I am afraid the prospects of an importation of American coal into this country are very small.

I beg to remain, sir, very respectfully,

A. Blühm.

Robert P. Skinner, *Consul.*

Marseilles, *May 15, 1900.*

NANTES.

The following extracts are from a letter by Consul Brittain, of Nantes, to a New York company, which has received a copy:

I have visited the head office of the Compagnie Blanzy & Ouest, and find the director much interested in American coals.

As to the financial standing of the company, I beg to inform you that consuls are not permitted to give a rating. However, I give you the names of some of the leading banks in the city, any one of which will no doubt be glad to comply with your request in that respect: Comptoir National d'Escompte, No. 8 Rue Lafayette; Credit Lyonnais, No. 4 Rue Boileau; Société Générale, Place Royale. In the business directory of Nantes the company is quoted as having a capital of 2,400,000 francs ($463,200.) It imports annually over 400,000 tons of coal from Great Britain. In addition to the coal trade it has a plant near the city where "briquettes perforées," or blocks for fuel, are made, in part from pitch and coal dust, and are used for fuel in firing boilers, and also for domestic use. The company also owns steamers, but they are used exclusively in the coasting trade of the firm.

The director, Monsieur Pergeline, informs me the company is very anxious to establish trade relations with American coal dealers. Welsh coal for steam and domestic uses now costs about 23s. ($5.49) per ton free on board the vessels in Cardiff, to which must be added about 4s. freight to Nantes or St. Nazaire, making the coal cost at least 27s. ($6.56) on board ship here. He further states that about 25 per cent of the coal is nothing but dust when it reaches Nantes. He wishes you to furnish his company with samples of a good quality of steam coal and also of coal for domestic uses, bituminous; also samples of a good quality of anthracite. The samples can be sent from New York direct to Nantes by La Compagnie Générale Transatlantique Steamship Line. If the boxes containing the samples weigh about 50 kilograms (110 lbs.) each, you can probably send them at a less expense through the American Express Company.

The Blanzy & Ouest Company is not satisfied with the quality of anthracite from Great Britain, and says it contains a stony substance that will not burn. It is certainly inferior to our Pennsylvania coal. Last year, Great Britain sent 1,077,350 tons of coal to this port.

The people here are turning their eyes toward America and are studying our resources.

In a previous report (Advance Sheets No. 661, February 23; Consular Reports No. 235, April, 1900), Consul Brittain said:

Recently, three cargoes of American cannel coal were purchased for this port. The coal comes from Virginia, and has been sold to the State Railroad Company. It is used in manufacturing gas to illuminate their cars, and it is claimed that the coal yields a large percentage of gas. Cannel coal is sometimes mixed with the bituminous in the manufacture of gas for street illumination, as it adds to the brilliancy of the light. The coal above referred to was purchased through parties in London and costs, delivered in Nantes, from 55 to 60 francs ($10.62 to $11.58) per ton.

The large manufacturing industries located here make the market well worth investigating. Railroad and water transportation facilities are excellent. The largest vessels may enter the harbor at the mouth of the Loire, and vessels of 4,000 tons can bring their cargoes to Nantes, where they may be discharged directly into the cars of two of the leading railroads of France. Last year the imports of coal entered at St. Nazaire and Nantes, the ports of the Loire, amounted to 1,077,359 tons.

Albert Brosseau, of No. 4 rue Cambronne, Nantes, is anxious to correspond directly with some of the largest producers in the United States of cannel, bituminous, and anthracite coal. I also give the names of some of the leading coal importers:

Société Générale de Houilles Aglomérés, No. 8 Quai Brancas.

Compagnie des Charbons et Briquettes, No. 3 place de la Petite-Hollande.

H. Boutin, Latour-d'Auvergne, No. 35.

Powell-Duffryn, rue J. Jacques-Rousseau, No. 6.

Champenois, Pont Rousseau.

Before making purchases, these parties would no doubt wish to have samples and tests of American coal.

NICE.

The total consumption of coal in this district for the year 1899 was 100,000 tons, of which 89,000 tons came from England and the remainder from French mines situated in the departments of the Bouches du Rhone, Gard, and Loire. The qualities preferred here up to the present time appear to be Newcastle and Cardiff coals, both bituminous, the former being used to get up steam, and the latter, more brittle and giving less calories, besides burning more slowly, being used afterwards. It would appear that our anthracite coal would meet this requirement of economy.

The duty upon coal is 1.20 francs ($0.23) per ton and port charges 28 centimes ($0.054) per ton. The prices of English coal are at present the highest in years. I have been informed that at different times before the present advance set in, Newcastle and Cardiff coal sold at from 18s. to 22s. ($4.35 to $5.31), cost and freight, on board steamer at Nice. The custom-house duty and port charges are not included in prices quoted, as they are paid by the purchaser, and while the freight is included it is also in many cases paid by the purchaser here. At the present moment the price of English coal, cost and freight, on board steamer at Nice, is 30s. ($7.24) per ton. A limited quantity of English anthracite coal, as well as French, has been bought here at 26s. ($6.30), cost and freight, on board steamer at Nice. There being no American anthracite here, I am not able to make a comparison as regards the appearance of these anthracites, but I do not think that an analysis would fail to show the superiority in caloric power of our coal.

During the past few months the attention of capitalists has been directed to coal mines in this district, and experimental work is now going on with a view to ascertaining the quantity likely to exist and the continuity of the layers. I have examined samples of this coal, and am certain that as bituminous coal goes it is exceedingly inferior. I do not think it can be utilized for purposes other than the manufacture of briquettes. Of course up to the present time I have been enabled to see only surface samples of this coal, and these are rarely a fair indication of what may be found at a certain depth.

The principal buyers of coal in this city are J. B. Nial, No. 20 Cours Saleya; Beri & Durandy, No. 3 Place de la Liberté, and Monsieur le Directeur de la Compagnie du Gaz.

Prices should be given f. o. b. in the United States and the freight to Nice mentioned. The maximum tonnage of vessels should be 2,500 tons, and they should not draw over 18 feet of water.

HAROLD S. VAN BUREN, *Consul.*

NICE, *April 26, 1900.*

PARIS.

In reply to a New York correspondent,[1] Consul-General Gowdy writes from Paris, May 23, 1900:

The only coal that could be advantageously sent from the States to a port comparatively near Paris is that which could be used by factories, which should give the following analysis: 6½ per cent of cinder, 75 per cent of carbon, 18½ per cent of volatile matter, causing an evaporation of 8.5 liters of water per kilogram.

A hard coal will give the best results and would be acceptable to the railway companies.

A trial lately made with American coal, delivered at the port of St. Nazaire to the Orleans Railway Company by the steamship *Minerva*, has given the following results: Cinders, 5.2 per cent; carbon, 74.2; volatile matter, 20.6. This coal gives a short flame and leaves a light coke, which consumes too rapidly. It can be compared, for evaporation, to a good Scotch coal.

For delivery of coal to Paris and neighborhood, the most advantageous port is Havre. The price of transport from Havre to Paris per ton of 1,000 kilograms (2,205 pounds) is 7 francs ($1.35) by complete wagons of 10 tons, making 70 francs ($13.51) per wagon. Coal can be brought up the Seine by barges (special service), the freight from Havre to Paris being 5.50 francs ($1.05). This price could be lowered by making a contract or arrangements with the barge company on the Seine or the canals.

The custom duty is 1.20 francs (23 cents) per ton; the interior tax, or "octroi," for entry in Paris is 7.20 francs ($1.39). This latter tax is not so high for other cities in France, and in some parts does not exist at all.

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[1] To whom copy of the letter has been sent.

The largest consumers of coal in this consular district are in the suburbs of Paris, where factories are found. These generally use coal from the north of France, and also large quantities from Belgium (from Charleroi, Mons, Namur, Liege). This combustible is sold at present by contracts of from 1,000 to 1,500 tons per annum at the price of 25 francs ($4.82) per 1,000 kilograms on wagons at pit's mouth; carriage, custom duties, and "octroi" extra. Coal from Cardiff, in cargoes of 2,000 tons, without contract, is quoted at present at 19s. ($4.62) to 21s. ($5.10), free on board, the average freight of 1.20 francs (23 cents) from Cardiff to Havre being extra.

It is difficult to give exact figures as to the amount of coal used in Paris and suburbs, but it can be calculated, without exaggeration, at several million tons.

A dealer in this city is of the opinion, however, that it would be an advantage to sell at the port of arrival, such as Havre, St. Malo, St. Nazaire, La Rochelle, etc., where it would be easy to place a good coal similar to that of Cardiff. The consignments could then be sent to the industrial towns, such as Rouen from Havre, Le Mans from St. Nazaire, Rennes, etc., from St. Malo.

Sales, to be of advantage to the merchants here, should be quoted at a price delivered into barges alongside steamer or into wagons at railway depot.

According to the present ruling prices, the quotation should not be more than 36 francs ($6.94) per ton (of 1,000 kilograms) delivered as above at Havre, or 35 francs ($6.75) at St. Nazaire, at which place the sales would be more by single barge loads or wagons. Moreover, these prices should be reduced in proportion for large consignments. It is simply because of its cost that the Cardiff coal is now sold so little in Paris.

RHEIMS.

Rheims is a manufacturing city of over 100,000 inhabitants, and the consumption of coal for steaming purposes is large. The coal used for steaming is semibituminous, and most of the large manufacturing establishments buy directly from the mines in the northern part of France.

This coal comes by canal, and it cost, one year ago, 10 francs ($1.93) per 1,000 kilograms (2,204 pounds, or about a long ton), at the mines, and 15 francs ($2.90) for the same quantity delivered at Rheims.

The mine owners refuse to sell at the mines now for less than 24 francs (4.63) the 1,000 kilograms, and will make no future contracts for lower price.

Some of the manufacturers have contracts for sufficient coal to last them until September next at last year's prices, but they find it impossible to make the contractors fulfill their engagements promptly.

The stock of coal in dealers' hands having been exhausted, there is, just at this time, a great scarcity of all kinds of coal in the city. One would have no difficulty in disposing of good steaming coal at from $5.50 to $6 the long ton. This is double the average price for the last ten years.

I can not say how long this state of things will continue, but judging from the firmness of the holders of coal and their reluctance to name prices for the future, it would seem as if the high prices would rule for some time yet.

If American coal can be sold at a profit in Rheims, the question of transportation would be easy, and freights ought not to be high. From tide water in the United States coal can be laid down in Rheims with one handling. Ocean vessels can transfer their cargoes directly to canal boats at the port of Dunkirk, and from there they can be transported to this city at a cost of from 4 to 5 francs (77 to 97 cents) per ton.

If interested parties would send samples of their coal to Gerard Marlier, one of the largest coal dealers of this city, and state the price at which they would agree to deliver it at Dunkirk, I could soon ascertain whether contracts could be made for future delivery.

WM. A. PRICKITT, *Consul.*

RHEIMS, *April 14, 1900.*

ROUBAIX.

I forward a report from Mr. Benjamin Morel, consular agent at Dunkirk, which will serve as a supplement to my report of February 10, 1900.[1]

In the judgment of Mr. Morel, the lack of harbor facilities at Dunkirk will act as a bar to the importation of increased quantities of coal into this district, as the average rate of discharge at Dunkirk is from 300 to 350 tons per day, against 600 tons in other ports.

I have had various inquiries lately with regard to American coal, but the investigators inform me that the present high prices of freight, added to duties, render the importation into this district under existing conditions unprofitable.

On January 17, the government commission met in order to consult as to proper measures for alleviating the crisis in the coal industry. The majority reported against the suspension of the existing duty, and the Paris, Lyons and Mediterranean Railway, which had proposed on December 17, 1899, to reduce its tariff for one month from $2.40 per ton to $1.65 for the haul between Marseilles, Cette, and the basin of the Gard to the Lyons district, withdrew this offer on January 12, at the close of the St. Etienne strike. This action modifies for the present the intention of those here desirous of importing American coal.

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[1] See Consular Reports No. 236, May, 1900; Advance Sheets No. 684, Mar. 22; see also pp. 77–78 of this volume.

The coal used in this district is from the Pas-de-Calais, the mines of the department of the North, 47 in number, and from Belgium.

W. P. Atwell, *Consul.*

Roubaix, *April 10, 1900.*

REPORT FROM DUNKIRK.

The import of foreign coal into this district has been as follows:

	Tons.
1896	60,000
1897	60,000
1898	75,000
1899	81,000

Coal is imported from United Kingdom, received here in transit, and forwarded to Paris, about nine-tenths being for the use of the "Compagnie du Gaz Parisien" and one-tenth for household purposes.

The total consumption of coal is about 150,000 tons: two-thirds for industry, one-third for household use. Bituminous coal comes from French mines.

The present price is: Coal consumed in households, 28s. ($5.81) per 1,000 kilograms, including the town duty, which is 2.50s. (48 cents) per 1,000 kilograms. The price of coal used for industry is much lower and varies according to the kind. Coal consumed by steamers, 23s. ($5.50), delivered into bunkers. This is supplied by mines about 70 kilometers (43.4 miles) from Dunkirk. The supply of bunker coal amounts to 40,000 tons per year.

The scarcity of coal is specially due to the development of manufactures and great activity in the various metallurgic industries, and high prices are likely to be maintained for some time.

The great objection to American coal is the price, which should not exceed 21s. ($5.11) per 1,000 kilograms delivered into lighters free of dues. Customs duty is 1.30s. (25 cents) per 1,000 kilograms (2,204.6 pounds).

The present prices of British coal, 25 to 26s. ($6.08 to $6.32) per ton, are prohibitive.

ST. ÉTIENNE.

Of all the coal beds in France, that of the Department of the Loire is perhaps the most ancient. In any case it might be called the cradle of the coal industry in central France.

The Department of the Loire, although reckoned among the smallest in France, presents to the geologist a great variety of earths of very different ages, from stratified crystalline rocks, which the world over constitute the substratum of fossil earth, to the oligocene sediments which almost preceded the last upheaval of the Alps. Mica schist, granite, and porphyry are found in the greater part of the department.

The coal bed in particular is composed of three alternating kinds of rock—sandstone and schist of the feldspar type, sandstone and mica schist, and argilophyre (apyrous clay). The length of the coal bed is 46 kilometers, with from 28 to 30 veins, all of more than 3 feet in thickness.

The coal is in general very good and is superior to that of the neighboring coal beds. However, that fact is counterbalanced by a greater difficulty and a greater cost in working.

Under present conditions, the development of the coal industry in this region would seem to have almost attained its highest degree, and perhaps this should not be regretted, as the stock of coal remaining is not very considerable. Every year about 3,000,000 tons are extracted, and at this rate it is computed that it will only take fifty years to almost exhaust the district.

The coal beds of St. Étienne comprise three levels—upper, middle, and lower. The first consists of 13 veins, the second of 7, while the third, the most important of the system, comprises 8 veins of a thickness varying from 4 to 40 feet.

The exportation of French coal does not exceed 1,000,000 tons yearly.

The coal production of France being insufficient for the home consumption, a large amount has to be imported yearly from Belgium, Germany, and more especially from England. According to statistics for 1898, the amount of coal thus imported exceeded 11,000,000 tons.

Within the last few months, encouraged by the strikes among the miners in France and the consequent crisis in the coal industry on the one hand and the prolonged war in South Africa on the other, causing English coal to advance materially in price, some United States coal companies have begun a serious attempt to secure French custom. It is thus that Marseilles and Bordeaux have seen heavy cargoes of good Virginia coal come into the ports, and with some financial success. However, it should be said that up to the present the American coal can not find a market in the interior of France because the expense of transporting it to any distance, added to the price per ton at which it is sold, gives a total per ton a good deal in excess of the price of the home product and somewhat higher than that asked for English coal.

For instance, English coal sells at the port at 25 shillings ($5) per ton, while American coal is offered at 36 and 39 francs ($6.94 and $7.52). The duty at the port is 1.50 francs (29 cents) per ton, and the transport, say to St. Étienne from Marseilles, a distance of 356 kilometers, is 14.05 francs ($2.71); consequently American coal in this region would cost 51.55 francs ($9.95) per ton, a price that could not be entertained here. The high rate of transport was furnished me by the railway company, which also informed me that the rumored reduction of rates was not confirmed.

However that may be, I have been told that the American coal brought to the French ports is of exceedingly good quality, and were it not for the cost of inland transportation it would find a ready market, as there is no other objection to it. I have also been informed that one of the largest railway systems in France, the Paris-Lyons and Mediterranean Railway, has made a contract for 50,000 tons of American coal as an experimental order.

The above statements have been furnished me by the largest coal merchant of this city, who also allowed me to examine his correspondence relative to the subject from importers in Marseilles and Bordeaux in the effort to sell coal to him on terms mentioned, which makes plain the sole reason why the American offers were rejected.

The foregoing refers to coal other than anthracite. Anthracite is not produced in this district, and is purchased from the department of the Isère and from abroad.

As in the case of soft coal, the price of anthracite has been advanced this winter, and at present it is retailed at 4.80 francs (93 cents) per 100 kilograms (220 lbs.). The quality of anthracite marketed in this district is decidedly inferior to the Pennsylvania product. It is largely used, and the better article would find favor if prices could be met. However, as in all cases, the introduction must begin at the seaports, and from there the future markets must be developed.

HILARY S. BRUNOT, *Consul.*

ST. ÉTIENNE, *April 12, 1900.*

FRENCH COAL INDUSTRY.

The following details as to the production and importation of coal in France were printed in Consular Reports No. 236, May, 1900 (Advance Sheets No. 684, March 22).

Consul Covert, of Lyons, says: The area of coal territory in France covers 1,572,048 acres. These mines are in the departments of the Nord; of the Pas-de-Calais, immediately adjoining the Nord; the Loire, in the center of France, St. Étienne being its largest city; the Gard, in the southeast; the Saône-et-Loire, between the two rivers from which it derives its name, where the Creusot and other great metallurgical establishments are located; the Allier, in the center of France, and Auvergne, in the southeast. The men, women, and children employed in these mines number 125,000; their total wages amount to from 152,000,000 to 170,000,000 francs ($29,336,000 to $32,810,000).

The annual coal output of France is about two-thirds of its consumption. The railroads in France consume annually about 4,500,000 tons, the metallurgical establishments 6,000,000 tons, the mining industry 3,000,000 tons.

It is asserted, but not authoritatively, that France can greatly augment her output of coal. The more general opinion is that the country will have to look for her coal supply to the United States and other lands, where there are rich mines yet untouched. Some of the French mines now worked are very deep and are often flooded. The cost of pumping, timbering, and bracing averages 15 cents per ton in France against 4 cents in England. The deepest coal pits in France are in the Gard, where the miners descend 800 meters (nearly 2,500 feet).

Consul Atwell, of Roubaix, gives the following comparative table of importations for 1898 and 1899:

Country.	1898.	1899.
Coal:	*Tons.*	*Tons.*
England	4,702,436	5,924,500
Belgium	3,642,738	3,769,290
Germany	717,787	764,820
Other countries	7,525	8,810
Total	9,070,436	10,467,420
Coke:		
Belgium	641,288	653,480
Germany	724,775	736,550
Other countries	22,125	36,580
Total	1,388,188	1,428,610

GERMANY.

GENERAL REPORT.

In compliance with instructions dated March 10, from the Department of State, I have to submit the following information concerning the supply of and demand for coal in Germany, in addition to the previous reports of February 1 and 13 from this office on the same subject.[1]

The publication of those and other concurrent reports has led to considerable correspondence from parties in the United States, nearly all of which relates to offers of unimproved coal lands in western Pennsylvania, Virginia, and Tennessee, more or less remote from railway or other communication with tide water. The fact that there has been and is still an unusual dearth of coal in Germany and Russia seems to have been accepted mainly as a hint that there must be capitalists here who are ready to come to the United States, buy coal lands, open mines, build branch railroads, and make freight contracts with existing lines to seaports in order that Germany may obtain at some future time a supply of American coal. This is neither apparent nor probable. What Germany wants, and is ready to pay a fair market price for, is coal; not undeveloped coal lands in the interior of the United States or any other foreign country. The industries of this country are widely developed and are now in full activity; they employ so fully all the available capital that money is more scarce and generally dearer here than in England or the United States, and for this and other reasons German capitalists, so far as can be discovered, are not looking for mining investments abroad.

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[1] See Consular Reports No. 236, May, 1900; Advance Sheets, No. 674.

The fact may as well be realized at the outset, that if the United States are ever to have the important coal export trade to which our country is entitled by reason of its geographical position, limitless supply, and facilities for cheap inland transport, the work of developing such commerce must be done not by foreigners but by Americans. If, as appears to be the fact, they have not the facilities, the surplus mining capacity, the cheap transportation to tide water, and the colliers to carry the coal oversea, then these things must be created and built by Americans or they must be content to stay out of the game. If they have not the enterprise and courage to undertake it, because there is for the moment an active demand for coal at home, they can hardly expect foreigners who are busy with their own affairs to come and take such a task off their own hands.

Europe needs now and will in future continue to need, in greater or less degree, the coal that America has in profuse abundance. The problem is reduced from the outset to one of transportation, and for this the facilities will in the main have to be created. In all recent correspondence on this subject, but one letter has been received from the United States which makes a definite proposition that can be submitted to a German importer. This is the offer of a firm at New York to deliver bituminous screened gas and steam coal of good quality on shipboard at Philadelphia or Baltimore for $2.50 per ton. But no hint is given of what transportation to Hamburg, Bremen, or Rotterdam will cost, whether vessels are available, or how soon any given quantity can be delivered. The whole question of ocean freights is left to be figured out by the importer in an interior city of Germany, and having done his best by cable and letter to inform himself, he finds that the coal, when it should arrive, would cost, delivered at Berlin, rather more than Silesian soft coal, which can now be obtained here on large contracts for $4.64 per metric ton. Had the American dealer looked up the price and conditions of freight himself and given a price free on shipboard at a German port, there might have been a chance for a trade, as many German dealers and manufacturers would like to make a definite trial of American coals, but they are accustomed to have coal and other supplies offered to them here or on shipboard in German ports, and are not adepts in freight rates hitherward from foreign countries.

Moreover, the exigencies of the South African war and other demands have absorbed for the moment so large a proportion of British tonnage that the vessels of other nations are busily employed, freights are high, and shipping scarce and exacting as to rates.

From all that the present episode has shown, it would seem that before the export coal trade of the United States can become strong, independent, and therefore permanent, there will have to be built a class of colliers specially adapted to that service. The situation is much the same as when the ore and coal trade between the upper and lower ports of the Great American lakes was handled by schooners of 400 to 600 tons. The steam barge, carrying several thousand tons, easily handled by a small crew and of minimum cost in relation to tonnage, came upon the scene and the schooners disappeared, or were driven into higher classes of freightage.

The tank steamer saved—one might almost say created—the export petroleum trade to European countries where it met the competition of the Russian product. It is for the marine constructors of the United States to devise a collier for the trâns-Atlantic coal traffic, which will surely come when provision is made for it—a vessel of large carrying capacity, low cost of construction, with sufficient engine power to steam 7 or 8 knots an hour and give steerageway in all weathers, equipped with the best machinery for handling cargo, and with minimum requirements as to size of crew and consequent operating expenses, a vessel in short, built specially for the export coal trade, and which will do for it what the tank steamer has done for petroleum and the steam barge for the ore and coal trade of the lakes.

If the great coal-carrying railroads of Pennsylvania, Maryland, and Virginia were equipped with a fleet of such vessels and could give a through rate on coal from the mines to foreign ports, the problem would be solved.

THE PRESENT SITUATION IN GERMANY.

Since the last reports on this subject were submitted, the situation in respect to coal supply in Germany has undergone some inevitable modifications. The use of brown coal has greatly increased, and that industry is now in a condition of unprecedented activity. Brown coal has been found available for many purposes to which it had not previously been applied, and it is likely that this larger employment of a lower and cheaper grade of fuel will continue after the normal supply and prices of bituminous coal have been restored.

Germany and Luxembourg mined during the year 1899, 101,621,866 tons of bituminous coal, which had an average value at the mine of $1.85 per ton, and 34,202,561 tons of brown coal, valued at 55 cents per ton. During the same year there was imported 6,220,418 tons of coal, of which 4,873,554 tons came from Great Britain, the remainder from Belgium, Holland, and Austro-Hungary. The miners' strike in Austria began in January of this year and continued ten weeks, during which period the reserve stocks were exhausted and the industries of Bohemia, Saxony, and Silesia were for a time seriously embarrassed, many large works being compelled to shut down for want of fuel. Thereupon, the great syndicate which controls the mining of coal in

Germany suspended provisionally its restrictions limiting the amount permitted to be mined, with the result that during the first three months of 1900, there was a net increase of 4.68 per cent in the output of the German mines.

The import statistics for March this year are not yet accessible, but the coal imports for January and February reached 734,977 tons, against 707,337 tons during the same two months in 1899, and 670,373 tons in the corresponding period of 1898. The import from Great Britain was 509,408 tons during the first two months of 1899, and 561,167 tons during the same period this year. Since the beginning of March, however, imports of British coals began to show the effect of high prices and deficient supply, though there seems less reason now than six months ago to suppose that England will be unable to supply this year nearly the usual amount of coal for export to Germany.

Prices are considerably higher than the usual rates at this time of the year. Dealers here are now willing to pay 30 marks ($7.14) per ton for English anthracite delivered at Berlin, which they retail for 2.30 marks per centner ($10.94 per ton) in quantities of half a ton or less, 2.20 marks per centner ($10.47 per ton) in lots of one-half to 3 tons, and $10 per ton for quantities from 3 to 20 tons.

So far as can be ascertained, there is no American anthracite in this market. A cargo was sent here for trial about four years ago, but proved too "stony;" that is, contained so large a percentage of siliceous material that it formed clinkers, clogged grates, and dissatisfied consumers, so that the experiment was not repeated. When again American anthracite is exported to Germany, it should be only of the purest and best quality.

English bituminous coal is now offered by agents in cargo lots to Berlin dealers at 28 marks ($6.66) per metric ton delivered here, and as stocks are everywhere in Germany practically exhausted, dealers who seek to keep up their trade are buying for temporary supply at this unusual rate. How long it will hold can only be conjectured, but experienced judges expect that coal will be costly in Germany during the remainder of the present year. The pinch of the past three months has cleared out the usual surplus, so that dealers and consumers of all classes, from ironmasters to private families, are living, in respect to coal supply, from hand to mouth.

Certain American newspapers, commenting on the present situation, state that "coal shipped by the operators of Maryland and Virginia is being laid down at Hamburg for $3 50 per ton, as an outside figure." River freights from Hamburg to Berlin fluctuate somewhat, but the present rate of 3.30 marks (78½ cents) per ton is a fair average for the year. If the foregoing statement is true, American soft coal should be landed here for $4.28 (or 18 marks) per ton, which is 10 marks, or $2.38, below the current demands of the agents of English soft-coal operators, and 1.50 marks, or 36 cents, below the current Berlin price of Silesian coal of the grade used for manufacturing and household purposes.

FRANK H. MASON, *Consul-General.*

BERLIN, *April 12, 1900.*

SUPPLEMENTAL REPORT.

LATEST ASPECTS OF THE GERMAN-AMERICAN COAL TRADE.

Since the date of last report from this consulate, the situation—in respect to the coal export traffic from the United States to Germany and Russia—has cleared somewhat, as practical men begin to realize more exactly what is possible with present shipping facilities and what is not. The demand for household coal has declined with the warmer spring days; the agents of English coal operators have been unusually active, the mines of Germany and Austria are working to their highest capacity, and under these combined influences prices are slowly receding toward their normal level.

The best English gas coals are now offered in Berlin for 23s. ($5.49) per ton delivered here. Cardiff semibituminous coal commands the same price. Northumberland steam coal of small size brings 19½s. ($.74) and British screened nut anthracite 34s. ($8.26) per ton. At Hamburg, West Hartley coal, which was quoted as high as 25s. ($6.08) during the pinch of a month ago, can now be had in cargo lots for 19s. ($4.62), free on board at that port.

No American coal has been received at Berlin, nor is there any present prospect of any. A highly intelligent and enterprising merchant who left here for the States at the beginning of the stringency in early March, hoping to make purchases for immediate importation, has returned with the information that bituminous coals of the qualities suitable for export to Germany cost on shipboard at Philadelphia and Baltimore $2.50 per ton, and that when to this is added the 16s. ($3.89) now demanded as freight from those ports to Hamburg or Bremen, the cost becomes prohibitive.

During the past week, an agent of a coal company at Baltimore which mines 3,000,000 tons of coal per annum in western Pennsylvania and Virginia, has been here and found the principal dealers ready and willing to buy at the prices which are being paid for corresponding grades of English and Silesian coals, but here again the cost of sea freight interferes fatally, and the problem reverts to its original and inevitable proportions, a question of transportation, for which no adequate facilities now exist, and for which they must be created before American coal exports can become important or permanent.

It remains, therefore, to state concisely the conditions upon which this new enterprise—if it be undertaken seriously—will be based, and certain facts which, being likely to remain permanent, should be kept constantly in sight. Any plan for coal exports to Europe should include not only Hamburg, Bremen, and Rotterdam, but the ports of the Baltic, the Mediterranean, and the Black Sea, for Russia, equally with Germany, is likely to need a supply of imported coal for many years to come. The question of return freights is also important and should be considered as part of the general proposition, which includes primarily the following elements:

I. The kinds of coal best adapted to European markets.—For the general trade in Germany, the supply of fuel for household use and ordinary purposes of manufacture, the hard, bright, clean block coals of western Pennsylvania would represent the standard quality. Such coals contain from 58 to 60 per cent of fixed carbon, about 36 per cent of volatile matter, and 4 to 6 per cent of ash. They have a glistening surface and, what is most important, stand the long journey by rail and water without being reduced to slack. When contracts are made for a permanent supply to German manufacturers, softer coals will be available, according to the special use intended, whether for gas, steam, coking, or other purposes, but coal to be handled by retail dealers should be hard and retain as high a percentage of lump as is possible.

II. The question of transportation.—Coals of the quality just described will bear, at present market prices, an ocean freight rate of $2.50 per ton to Bremen, Hamburg, and Stettin, all of which are ports accessible to vessels of deep draft. But for the normal trade of the future the sea freight must be reduced to an average not exceeding $2 per ton, which, added to the cost of production and delivery at seaport, would enable American coals to meet all competitors in European markets. Is this possible, and, if so, how?

Assuming that the present prohibitive rate of 16s. per ton will convince American coal operators and coal railway managers that the coasting schooner and tramp steamer can not be relied upon to handle the future coal export trade of our country, and that a special class of colliers will be built for that purpose, can they exist on a general $2 rate to European ports? This will probably depend, in some measure, on the amount of bulk freights which they can secure for the return trip. English coal now comes to Hamburg and Bremen for 4 to 5s. ($0.97-$1.21) per ton in steamers which take no back freight, but return in water ballast, making the round trip in about one week. Similarly it was found that steamers and barges on the Great Lakes could pay dividends on a 60-cent rate on ore from the Superior mines to lower lake ports without return freight. But for trans-Atlantic round trips of several weeks' duration, the element of homeward-bound cargo is too important to be ignored in the calculation.

Most exports from Germany to the United States are of manufactured merchandise, which is sent by fast steamers and pay the high rates which are charged for such service. There remain as heavy bulk freights, in respect to which rapid transit is unimportant, Portland cement, of which this country shipped to the United States 226,838 tons in 1899, potash fertilizing salts, 150,000 tons, besides chamottestone, spiegeleisen, and various other articles, the export of which would be largely increased if a permanent, reliable rate of $1 or $1.20 per ton could be guaranteed. From Black Sea ports would come manganese ores, from the Greek Islands certain minerals, for which a cheap freight rate is essential. Mineral waters from the Rhine Valley, already an important item of export, would form another contribution to the freight list of the returning collier, and other articles of low value in relation to bulk would be added when once the opportunity of cheap, regular freights were offered. Could the collier of 6,000 to 10,000 tons burthen, specially designed for the foreign trade and operated with minimum outlay for crew and other expenses, live on an outward-bound coal rate of $2, and a return rate for bulk freights of $1 to $1.50 per ton? This is the problem in a nutshell.

In the construction of colliers for the European trade, note should be made of the fact that while ports on the North Sea can receive steamers of any ordinary draft, some of those in the Mediterranean and Black seas, as well as those of the Baltic (with the exception of Stettin), are often unsafe for vessels of greater draft than 15 feet.

In the development of a future export coal trade, it is apparent that the mines and ports of the Southern States will play an important part. During the present episode there has been widely reprinted by the German press, with approving comments, a definite but somewhat incredible story which came from high sources in the United States, to the effect that a syndicate headed by an important bank in London had on the 14th of April closed a contract for the delivery of 2,000,000 tons of Alabama coal at New Orleans, at a cost of 75 cents per ton at the mines and 50 cents by rail from mine to seaport. This, if true, would give a net cost on shipboard $1 per ton cheaper than anything yet offered at North Atlantic ports, and the story goes on to say that English steamers have already been chartered by the syndicate to transport this coal to European ports and to coaling stations in the South Atlantic which are now supplied from British mines.

From whatever point the subject may be viewed, it can not be doubted that the present dearth and high cost of coal in Europe has opened to American coal operators, railway managers, and shipowners an opportunity for export traffic which they have hitherto but dimly recognized, and which they will grasp and develop with the energetic and intelligent enterprise which they have shown in mining, handling, and transporting coal, ore, and other minerals within the frontiers of the United States.

FRANK H. MASON, *Consul-General.*

BERLIN, *April 25, 1900.*

AIX LA CHAPELLE.

Upon careful inquiry, I find that no foreign coal is imported into this district. A representative of English coal mines canvassed all industries in this city and surroundings a year ago, but did not succeed in placing any orders.

There are coal mines within 6 miles of the city limits, and most manufacturers buy direct from mines and always fix price per car for the ensuing year. The manufacturers use the coal as brought to surface from mines and dumped direct into cars, it averaging 30 per cent large lump, 40 per cent egg, and 30 per cent fine or "screenings." It is semianthracite, very easily ignited, requiring little draft, and is a very good steam coal. For domestic purposes, with the kind of stoves in use, it is also very satisfactory.

The source of supply is what is known as the River Wurm district. I have been trying for some time to learn the surface area of coal beds, thickness of veins, and area of unmined or estimated coal, but have not succeeded.

The output in 1899 was 1,848,164 tons; coke, 258,561 tons; briquettes, 33,519 tons. The number of persons employed in and about mines is 6,870 men and boys and 16 women.

About 20 miles from the city there is a large deposit of what might best be termed slack or coal dirt, and from this is manufactured a great quantity of briquettes.

There have recently been two new discoveries of coal within one hour from this city, both in Holland. As near as I can learn, it is a continuation of the Wurm district deposit.

The principal mining company operating in this vicinity is the "Vereinigungs Gesellschaft," working possibly 20 shafts; the "Eschweiler Bergwerke," operates about 10 shafts.

The following wholesale prices are given me by a coal dealer in this city:

Description.	Price.	United States equivalent.
	Marks.	
10 tons lump coal on car at mines, with a thirty-day credit	160	$38.08
10 tons containing 70 per cent lump	135	32.13
10 tons containing 50 per cent lump	122	29.03
10 tons containing 30 per cent lump	112	26.65
10 tons all fine or dust or screenings	100	23.80
10 tons washed and screened egg	180	42.84
10 tons washed and screened best nut	225	53.55
10 tons washed and screened best mixed	160	38.08
10 tons briquettes, for bakers' use	130	30.94
10 tons egg briquettes	140	33.32
10 tons cake briquettes	180	42.84
10 tons coke	180	42.84

Coke has been a drug on the market until this winter, but is now in demand. The gas company here had a large stock, but has sold nearly all.

Manufacturers who contract for a year's supply, in large amounts, for coal as brought from mines, 50 per cent lump for 10 tons, pay 120 marks ($28.56) to 130 marks ($30.94). Gas coal, which comes from Westphalia, costs 90 marks ($21.42) to 120 marks ($28.56) per car of 10 tons.

There is no duty on coal, but this city has an octroi tax of 6.76 marks ($1.61) on each car of 10 tons. The freight from the mines, including delivery in this city, is 10 marks ($2.38) per car of 10 tons.

There is but one gas company in this city, an English firm, with exclusive privileges and fixed prices. Its lease continues until 1914. The superintendent informed me that they get all their gas coal from Westphalia, and they calculate on getting 10,000 feet of gas from each ton. The contract price for 1900 is 100 marks ($23.80) per 10-ton car at mines, 16 marks ($3.80) being added for freight. They are expecting a rise to 120 marks ($28.56) per 10 tons in 1901. They use 40,000 tons of gas coal per year.

The general impression is that there is a coal shortage somewhere, but no one has experienced it here. I have interviewed many manufacturers, and they invariably answer that there is "plenty of coal, but a shortage of cars," and this lasted only during the month of January.

A representative of the Rothe-Erde Ironworks, a concern covering 10 acres and employing 4,500 men, and the largest consumer of coal in this district or city, informs me that they have had difficulty in obtaining the desired quality of coal and coke during the last few months, but now that difficulty seems to have been obviated.

The prices given above are for 1900 and are about 5 per cent higher than for 1899. I also give retail prices (including delivery in cellar) in this city of 3,300 pounds, or cartload orders, as follows:

Description.	Price.	United States equivalent.
	Marks.	
Lump coal (without dirt)	30.50	$7.26
70 per cent lump	26.00	6.19
50 per cent lump	23.50	5.59
25 per cent lump	22.00	5.24
Dirt on screenings	20.00	4.76
Washed coal:		
Egg	34.00	8.09
Nut	41.00	9.76
Chestnut	31.00	7.38
Briquettes (for bakers' use)	27.00	6.43
Egg briquettes	27.00	6.43

I am informed by a reliable retail coal dealer that these prices are fixed by the mining companies, and that any retailer selling under the price list can have no more orders filled. In fact, coal is one of the many trusts of Germany.

There are large and almost inexhaustible peat deposits in the Eiffel Mountains, on both sides of a railway, about 40 miles from this city, and this represents a large part of the fuel used by the peasants; much is also consumed in this city. It is cut, with a spade or a sharp knife, in the shape of a brick 6 by 10 inches, 2 inches thick, and is placed on racks to dry, when it is ready for fuel.

FRANKLIN BRUNDAGE, *Consul.*

AIX LA CHAPELLE, *April 9, 1900.*

BARMEN.

The managers of the Rhenish Westphalien coal syndicate at Essen, on being interviewed, cheerfully expressed their willingness to give all desired information with regard to the state of the coal trade.

The syndicate is not getting its usual supply at the present time, for the following reasons:

(1) Increasing quantities of coal are being used for the production of coke, for which purpose 1,300,000 tons will be employed during the fiscal year 1900–1901.

(2) Quite a number of coal mines have been acquired by large iron foundries and other establishments, causing a deficiency estimated at 1,500,000 tons.

(3) There is an increase in the manufacture of briquettes, for which 250,000 tons are being annually consumed.

(4) Some mines are now being worked by the owners, viz, Bochumer Verein, Gute Hoffnungshütte, Deutscher Kaiser, etc., the production being thus withheld from the syndicate.

The syndicate expects these losses to be balanced by an increased output, but no positive estimate could be made, and the syndicate had no other means but to contract with their customers and dealers for the fiscal year 1900–1901 on the basis of deliveries of 1898–99 (ended April 1).

The last deliveries on late contracts with dealers will be made this week, and dealers have accumulated stocks, likewise raising prices. One large dealer in Barmen, having received 50,000 tons from the syndicate, has been withholding this entire quantity from the market.

The syndicate disapproves of an unjustified increase of prices by dealers, an advance of from 5 to 10 marks ($1.19–$2.38) for 10 tons being considered sufficient, except for small quantities.

A reasonable advance would fix the price of dealers for the new fiscal year at 112 to 122 marks ($26.65–$29.03) for 10 tons. Some dealers are now asking as high as 160 marks.

The district of Barmen in 1900–1901 will receive from the syndicate the same quantity as last year, if not more.

There is still considerable export of coal to Belgium and Holland, which can not be stopped, as it would throw thousands of miners and laborers out of employment.

Reports that considerable quantities of coal had been shipped to Bohemia from the Ruhr district are absolutely untrue; there were in all only 30 to 40 carloads, but 300 carloads went from stocks in Mannheim, poor qualities that had been on hand there for quite a while.

The opinion prevails that prices will soon return to their old standard.

The increase of production of coal since 1893 is 43.2 per cent; total export in 1899, 13,943,174 tons; total import in 1899, 6,220,489 tons; total production of (stein) coal in Prussia in 1899, 94,778,252 tons, of which 50.67 per cent came from syndicate mines.

The advance in price since April 1, 1899, has been, coal 50 pfennig (12 cents); coke, 1 mark (23.8 cents) per ton. Since April 1, 1900, another advance of from 75 pfennig (17.8 cents) to 1.50 marks (35.7 cents) per ton has been made.

The quality of coal principally used here is bituminous and anthracite (nut), dry for factories.

A Bremen firm (American Import Company, Stephan & Co.) has written to the chamber of commerce of this city, recommending American steam coal, without, however, quoting prices.

I have since been informed that inquiries have been instituted by several manufacturers, the result being that prices were found entirely too high. There is no objection to American coal, except for above reason.

Coal of every description, such as brown, gas, wood, and stone coal, is free of duty in the German Empire.

MAX BOUCHSEIN, *Consul.*

BARMEN, *April 2, 1900.*

BREMEN.

The demand for coal in my district is large, and the conditions of the coal market here are favorable, not only in periods of strikes, but at all times. This is due to the fact that this section is a shipping center with numerous large industrial establishments, all of which require enormous quantities of coal, year in and year out. The distance from the Westphalian coal fields to Bremen being considerable, the rates for transportation are necessarily high, which fact also favors the importation of foreign coals, which now come principally from England.

Steam coal naturally forms the greatest part of the coal the market here demands, but the consumption of anthracite is by no means small, while coke is coming into favor more and more for domestic fuel, particularly for furnace heating. The so-called "American" stoves, or self-heaters of German manufacture, which require anthracite, are continually gaining favor, and all this notwithstanding the fact that Bremen is the center of the cheap peat fuel, with the large peat bogs in Oldenburg and Bremen territory.

It is estimated that about 25,000 to 30,000 tons of anthracite coal are annually used in Bremen and immediate vicinity, most of which come from England, Wales, and Scotland. The German anthracite, of which Langenbrahm is the best, is inferior to most of the English. The prices of coal vary, of course, according to quality. The present retail prices for the best anthracite are 48 marks ($11.42) per ton metric, double washed, hand picked, chestnut size. I may add here that this grade contains absolutely no slate and is actually as claimed—a double-washed, first-class, hand-picked coal. Samples of American anthracite have repeatedly been brought here, but do not seem to have compared favorably, as regards washing, picking, etc., with the Welsh coal. The American anthracite is certainly a harder and, no doubt, a better coal, with a finer luster than that from the English mines, but the washing and picking do not seem to be done so carefully. The buyers here lay great stress on this point, and they are accustomed to being well served by the English collieries in this respect.

As to steam coal, several million tons are used annually in Bremen and the surrounding country, of which England supplies about 600,000 to 700,000 tons, mostly from Cardiff and Swansea. The balance comes from the Westphalian mines and is chiefly bunker coal. The term bunker coal, however, does not designate a ton of dust with several large and small lumps in it. The bunker coal required for the fast ocean steamers is as fine a coal as was ever mined, with at least 50 to 60 per cent of lump, and will compare favorably with the best American grades, Pocahontas, Cumberland, and New River not excepted.

The question of lumpage is paramount with coal buyers here and elsewhere, and buyers will pay a trifle more if a large percentage of lump is guaranteed. Nor are they satisfied with the mere statement that lumps are contained in the coal; they also desire to be informed as to the average sizes of the lumps. In this respect, the coal dealers here have always been served to their satisfaction by the English mines, so that in attempting to import American coal particular attention would have to be paid to this point, without which all chances of obtaining a permanent foothold here would be out of the question.

Hitherto American steam coal has not been marketed here, though numerous overtures have been made. The difficulty lies partly in the prices and partly in the lack of sufficient facilities for transportation. During the recent coal famine in Germany, brought on by protracted strikes, the buyers and consumers turned their eyes to America for supply, but the American mines demanded such high prices that no business resulted from the numerous negotiations, except small sample shipments here and there, to other consular districts. Our American coal exporters should bear in mind that, to be successful, a difference must be made in the prices of coal for Central America, the

Mediterranean countries, and Germany. The high prices paid at Mediterranean ports can not be obtained here. If our people desire to obtain a foothold here, they must, as is the case with all commercial articles, make specially low prices, in order first to acquaint the buyers with the article. The Germans are slow in changing their sources of supply, and, except for imperative reasons, they will pay higher prices for English coal rather than assume, as one dealer expressed it to me, the risk of the uncertain quality of the American article. The American exporters must learn, once for all, to accommodate themselves and their goods to the markets where they wish to sell, and the sooner they learn this the better.

The price of steam coal are, at present, according to grade, from 18 to 22 marks ($4.28 to $5.24) per metric ton, free Bremen, and it is rumored that after July 1, a further advance of 20 per cent will be made by the Westphalian Coal Syndicate, owing to the strong demand and scarcity of supply. But there is a hesitancy to contract at present prices. Dealers here earnestly hope that after the termination of the South African war (which, it is expected, will soon occur), the prices of English coal will go down. However, there is a willingness to contract for a good steam coal at a price of from 18 to 19½ marks ($4.28 to $4.64) c. i. f. Bremen, in order to be relieved from this uncertainty, even if the prices should go down next fall.

The one great obstacle to selling American coal in this market is the question of transportation. This is even more important than the question of price. The sine qua non of success is a quotation of c. i. f. prices. England is offering her coal c. i. f., and the United States will have to do the same. During the last five or six months, there were instances when the American prices f. o. b. American ports might have been correct, if a freight of 10s. or 11s. ($2.43 or $2.69) could have been secured, and I know of an instance where a contract for 100,000 tons was canceled, because sufficient freights could not be obtained. All the attempts of the representatives of coal miners in this city to get German freights proved futile, the German shipowners saying that they could do better by carrying anything else than coal, which is a dangerous and dirty article; and all negotiations to establish a special line to carry coal failed. In England no vessels can be had at present, owing to the war, and the United States has no ships to speak of for this purpose, while tramp vessels all demand a higher rate of charter than the article warrants.

I see but one way to open a regular coal trade with Germany, and that is the establishment of a coal carrying line to the northern ports of Europe. This can be done either by building new coal steamers or by employing all the idle tonnage on our lakes. As to return freights, there can be no anxiety for the present. There will be plenty at good rates, and shippers will gladly guarantee them. But freight rates for coal should not exceed 8s. to 10s. ($1.95 to $2.43) in the calculations.

In the line of statistical information, I append a table which will show the quantity of coal brought to Bremen during the past four years:

Year.	German coal.	Foreign coal.	Total.
	Metric tons.	*Metric tons.*	*Metric tons.*
1896	413,527	214,971	628,931
1897	488,436	195,785	684,221
1898	476,567	183,737	660,304
1899	534,650	230,372	765,022

Of the German coal thus brought to Bremen, the following shows what quantity was again sent abroad:

	Metric tons.
1896	197,735
1897	280,993
1898	310,261
1899	325,161

A comparison of the two tables will show that a considerable and steady increase in the consumption took place, for during the last year 68,083 more tons of German coal were brought to Bremen than in 1898, while only 14,900 tons more were sent out again. The importation of foreign coal, too, increased by 46,635 metric tons. How much of the foreign coal imported to Bremen was again shipped into the interior, statistics do not show.

HENRY W. DIEDERICH, *Consul.*

BREMEN, *June 2, 1900.*

BRESLAU.

In reply to circular, I desire to refer the Department to my report on "Coal-mine Industry of the Province of Silesia,"[1] from which it will be seen that coal is shipped from this consular district all over Germany, and that on this account there is no market here for American coal.

C. W. ERDMAN, *Consul.*

BRESLAU, *March 30, 1900.*

CHEMNITZ.

The scarcity of coal in the industrial centers of Germany has brought about a discussion of the advisability of importing coal from foreign countries, especially from the United States and England, in order to free the industries of this Empire from dependence on Bohemian coal. The demands made by the producers and dealers of coal in Bohemia have caused some ill feeling among the German consumers, and there is no question, if we land our coal at the mouth of the Rhine and ship it up by slow freight to the Mosel, Main, and Neckar rivers to be distributed, that it will meet with ready sale. Large river boats run between Mannheim and Holland. Mannheim might be called the terminus of the Rhine shipping, and that point is a center of distribution for southern Germany. With proper attention on the part of our home producers, a very good market can, without doubt, be opened up.

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[1] See Commercial Relations, 1899, Vol. II.

J. F. MONAGHAN,
Vice and Acting Consul.

CHEMNITZ, *June 16, 1900.*

COBURG.

American coal has not been used in this district, except one small carload; but the opinion exists among consumers that it is of good quality and that if it could be bought as cheaply as other coals it would be in demand; but it is feared that owing to the sea freight from America to Bremen or Hamburg, also the railroad charges in coming to this district, the price would be very high.

The principal kinds of coal used here are—Saxon: First, small coal which is employed specially for steam purposes, 140 to 150 marks ($33.32-$35.70) a wagonload of 10 tons; second, so-called sea coal (or Steinkohle), in large lumps, used for household purposes and in the China factories, 160 to 180 marks ($38.08-$42.84) per wagonload of 10 tons. Bohemian: First, a good or A1 brown coal, 80 to 90 marks ($19.04-$21.42); second, Steinkohle, the common household coal of Germany, 140 to 150 marks per wagonload of 10 tons.

The above prices are for coal at the pits (mines).

The total consumption of coal in this district is about 400,000 tons a year. The freight from Saxony here amounts to 50 marks ($11.90) per 10 tons. The freight from Bohemia amounts to 90 marks ($21.42) per 10 tons. No import duty is paid on foreign coal; only a few marks for customs entry purposes.

There exists a discrimination against foreign coal on the part of the State railroads, as follows: The charge on 10 tons of coal from here to Bremerhaven would be 120 marks ($28.56), while to bring the same quantity of foreign coal from Bremerhaven here would cost 137 marks ($30.23), being a difference of 17 marks in favor of the German coal on every 10 tons.

The German industries are at present trying to get the Prussian Government, which owns the railroads, to put domestic and foreign coal freights on the same footing.

OLIVER J. D. HUGHES, *Consul.*

COBURG, *March 30, 1900.*

GERMAN COAL PRODUCTION.

The Official Imperial Advertiser states that the output of coal is increasing in a most satisfactory way. There has never been so much coal produced in Germany as in the month of March, 1900; 274,490 tons of coal and coke (brown coal and briquettes not included) were forwarded by rail from the various pits on the 23d instant—a quantity never before reached in any one day. The idea that Germany's capacity is restricted is, according to the Imperial Advertiser, quite erroneous; on the contrary, it may be reasonably expected that the output of coal will greatly augment in the near future.

To-day, the pits have been provided with machinery which will allow of a very considerable increase of production; to this, however, there is a certain limit, owing to the scarcity of miners. If no disturbances occur in the mining districts during the course of the year 1900, it is to be expected, according to calculations, that the increase will be at least 10,000,000 tons more than in 1899.

OLIVER J. D. HUGHES, *Consul.*

COBURG, *March 28, 1900.*

RHENISH WESTPHALIAN COAL FIELDS.

The following newspaper extract may be of interest:

> The Rhenish Westphalian coal field, which stretches west of the Rhine in the two Prussian provinces of Westphalia and the Rhine Province, is the basin of three tributaries of the Rhine—the Ruhr, Emscher, and Lippe. As the Lippe is almost out of the field, marking the extreme northern border, and the Escher is a river without any importance, the product is known in Germany as Ruhr coal. The basin forms a quadrilateral, whose coal treasure has been estimated at 35,000,000 tons. Recent borings have proved that this estimate errs only on the safe side. Up to the present, few of the workings extend to a greater depth than 700 yards. If that depth were not exceeded and 50,000,000 tons produced yearly, it has been calculated the coal would last two hundred years. But good coal is found at a depth of 1,000 yards.
>
> The development of the coal production in recent years is striking. About 1800, little more than 200,000 tons were brought up annually. The growth began after 1840, when the production reached 1,000,000 tons. Last year, 1899, it was 53,000,000 tons. But there were crises, which have disappeared since the establishment in 1893 of the great syndicate in Essen. The collieries are falling more and more into the hands of a few wealthy firms. In 1898 there were 168 collieries, giving occupation to 192,000 men; in 1892 the figures were 176 collieries, with 142,000 men.

OLIVER J. D. HUGHES, *Consul.*

COBURG, *April 6, 1900.*

PRICE OF SAXON COAL.

Consul Hughes writes from Coburg, June 13, 1900:

A few days back the price of the Saxon sea coal (Stückkohle), which comes in large lumps and is used for household purposes and in china factories, was advanced to 200 marks ($47.60) per wagonload of 10 tons. This is an increase since the middle of last year of 48 marks ($11.42). The advance cannot be attributed to increase in wages of the miners as the advance granted to the most favored class of laborers amounts to only 20 pfennigs (5 cents) per day.

CREFELD.

As yet no foreign coal is used here, but if coal can be advantageously imported, this year and the years 1901 and 1902 will, from the present outlook, be opportune for such importation into this market; i. e., Rheinland and Westphalia. It is estimated that the yearly consumption of coal in Crefeld is 150,000 tons for industrial purposes and 60,000 for heating and household purposes. The coal used for industrial purposes is known here as fett and flamm coal—bituminous—mixed, 50 per cent lump and 50 per cent fine. For household purposes a poorer grade of the above is used, and anthracite coal for heating.

The following prices per ton are f. o. b. at the mines: Anthracite—nut coal, 20.50 to 24 marks ($4.88 to $5.71). Bituminous—gas coal, used in the gas works, 12 to 13.50 marks ($2.86 to $3.21); boiler coal, 9.75 to 10.75 marks ($2.32 to $2.56); best mixed, 10.75 to 11.75 marks ($2.56 to $2.80).

Coke is worth from 21 to 24 marks ($5 to $5.71) per ton, and briquets 12 to 15 marks ($2.86 to $3.57). The freight from the mines to Crefeld averages 1.50 marks (36 cents) per ton. The present coal supply comes from the mines operated by the Rheinisch-Westphalischen Kohlen-Syndicate.

I am not able to give the cost of transportation from America to Dutch and Belgian ports. Iron ore has been brought as ballast to Holland or Belgium for 6 marks per ton. Reloading in Rotterdam from ocean vessel to Rhine steamer or coal barge would probably cost 0.50 to 0.60 marks (11.9 to 14.2 cents) per ton; and the freight from Rotterdam to Duisburg or Uerdingen, 1 to 1.30 marks (23.8 to 30.9 cents) per ton. From Uerdingen it would be carted to Crefeld, a distance of 3 miles. This would be the cheapest route for introducing coal into this district.

Wm. P. Phelps,
Vice and Deputy Consul.

Crefeld, *May 7, 1900.*

DRESDEN.

There is an almost inexhaustible supply of coal within a radius of 100 miles of Dresden, some of the mines being distant only 10 or 20 miles from the city, and I doubt the practicability of introducing American bituminous coal into this consular district, despite the fact that the German Empire imposes no duty on the article.

During the early months of this year an almost universal strike of the miners occurred, resulting in great scarcity of fuel in this city and greatly enhancing the cost; but the strike has terminated; the supply is now ample, with prices about normal. Mines at Dun, Mariaschein, Brüx, and Ossegg produce a brown coal that is very cheap, burns readily, does not clinker grate bars, and is an effective steam fuel, although it seems to contain more sulphur than is desirable.

Mines at Plauen, Zwickau, and Silesia produce what is called stone coal, which has many of the qualities contained in the bituminous coal mined in Pennsylvania, except that it is harder, and does not slack so readily with exposure to the weather. The gas produced from this coal equals in illuminating power and volume the gas furnished in American cities, and sells at a price somewhat lower.

Stone coal and brown coal mixed are admirably adapted for use in the large porcelain-covered stoves almost universally used in Germany, but I am convinced American bituminous would do as well.

I send herewith a list showing the wholesale and retail prices of the different kinds of coal prevailing in this city during the winter of 1898–99; it is proper to add that the wholesale prices are f. o. b. cars at railway station or barge at river. No attempt has ever been made to introduce American bituminous coal in this city, but interested parties can easily determine if it is feasible after comparing prices with the cost of placing their product at Hamburg, to which should be added transportation by river Elbe from Hamburg to Dresden with cost of handling—in all, 5 to 7 marks ($1.19 to $1.67) per ton of 2,240 pounds.

I can not learn that any coal is exported from this consular district. A limited quantity of anthracite coal is annually brought to this city from England, and one dealer informed me the consumption would be increased if the people had better appliances for using it. The porcelain stove will not endure the intense heat and gas that are generated from anthracite, and I think Dresden presents a market for American stoves adapted for burning hard coal. The English anthracite coal, I am informed, is mined in blocks which are shipped to Hamburg, where there is a warehouse with machinery for breaking, screening, and assorting, after which it is loaded on barges for shipment to this city, where it arrives without breakage or waste.

Another dealer informs me an attempt was made to bring American anthracite coal to this city, but the venture proved a financial loss because the coal was so badly broken up that one-third of the cargo was unsalable.

The wholesale price of English anthracite in this city on barge at river is from 32.50 marks ($8.50) to 37.50 marks ($9.75) per ton of 2,240 pounds.

From 2,000 to 3,000 tons annually will cover the sale of anthracite coal in this city, but I am not able to obtain an estimate of the consumption of other coal, although it is very large. The people here are loth to give out information of this character, and since the German and English newspapers have spoken of the enterprise of some American consuls, I find great difficulty in obtaining information necessary to answer inquiries from the Department of State and others.

CHAS. L. COLE, *Consul-General.*

DRESDEN, *April 14, 1900.*

Bituminous coal (*steinkohlen*).

Kind.	Location of mine.	Prices.			
		Wholesale, per 10,000 kilometers = 10 tons.		Retail, per hectoliter.[1]	
		Marks.	United States equivalent.	Marks.	United States equivalent.
Gas coal (gaskohle)	Plauen and Dresden	186.00-198.00	$44.27-$47.12	1.60-1.65	$0.38 -$0.39
	Zwickau, Saxony	190.00	45.22	1.60	.38
	Silesia	208.00	49.50	1.65	.39
Block coal (stückkohle) or piece coal.	Plauen	170.50-192.00	40.58- 45.70	1.50-1.65	.357- .39
	Zwickau	208.00	49.50	1.65	.39
	Silesia	208.00-230.00	49.50- 54.74	1.65-1.75	.39 - .416
Medium coal (mittelkohle).	Plauen	168.00-184.00	39.98- 43.79	1.45-1.60	.345- .38
	Silesia	208.00	49.50	1.65	.39
Tar coal (pechkohle)	Zwickau	208.00-212.00	49.50- 50.46	1.65-1.80	.39 - .428
Lump coal (würfielkohle).	do	208.00	49.50	1.65-1.70	.39 - .404
	Silesia	203.00-230.00	48.31- 54.74	1.60-1.80	.38 - .428
Tar lump coal (pechwürflelkohle).	Zwickau	205.00-210.00	48.79- 49.98	1.65-1.75	.39 - .416
Small broken coal	Silesia, Plauen	162.00-182.00	38.56- 43.32	1.40-1.50	.33 - .357
Nut coal (nusskohle)	Plauen	174.00-190.00	41.41- 45.22	1.50-1.60	.357- .38
	Zwickau	202.00	48.07	1.60	.38
	Silesia	196.00-220.00	46.65- 52.36	1.60-1.75	.38 - .416
Wash coal (waschkohle)	Plauen	144.00-168.00	34.27- 39.98	1.25-1.40	.297- .33

Brown coal (*Braunkohlen*).

Kind.	Location of mines.	Prices.			
		Wholesale per 10,000 kilometers=10 tons.		Retail per hectoliter.[1]	
		Marks.	United States equivalent.	Marks.	United States equivalent.
Lump coal	Dux, Bohemia	98.00-120.00	$23.30-$28.56	0.72-0.90	$0.17 -$0.21
	Mariaschein	109.50-130.00	25.06- 30.94	.80- .90	.19 - .21
	Brüx	110.00-130.00	26.18- 30.94	.80- .90	.19 - .21
	Ossegg	129.00-145.00	30.70- 35.22	.95-1.15	.23 - .27
Medium, first quality	Dux	96.00-118.00	22.85- 28.08	.75- .85	.18 - .20
	Mariaschein	108.00-130.00	25.70- 30.94	.78- .90	.185- .21
	Brüx	109.00-130.00	25.94- 30.94	.80- .90	.19 - .21
	Ossegg	125.00-148.00	29.75- 35.22	.95-1.10	.23 - .26
Medium, second quality	Dux	93.00-118.00	22.13- 28.08	.75- .85	.18 - .20
	Mariaschein	108.00-130.00	25.70- 30.94	.78- .90	.185- .21
	Brüx	105.00-130.00	24.99- 30.94	.80- .90	.19 - .21
	Ossegg	125.00-148.00	29.75- 35.22	.95-1.10	.23 - .26
Nut coal, first quality	Dux	85.00-110.00	20.23- 26.18	.70- .80	.17 - .19
	Mariaschein	98.50-115.00	23.44- 27.37	.75- .80	.18 - .19
	Brüx	101.00-115.00	24.03- 27.37	.75- .85	.18 - .20
Nut coal, second quality	Dux	72.00-105.00	17.13- 24.99	.65- .75	.15 - .18
	Brüx	94.00-105.00	22.37- 24.99	.68- .75	.16 - .18

NOTE.—The above prices represent the average prices paid for coal delivered free, Dresden, during the winter of 1898-99.

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[1] One hectoliter black coal weighs from 160 to 175 pounds, and of brown coal, 125 to 145 pounds.

FRANKFORT.

Owing to the continuance of the coal famine in Germany, the imports of coal, coke, and pressed coal bricks (briquettes) from England and other foreign places have increased largely since the new year.

The imports of English coal and coke at the port of Hamburg during last month (March) were 290,532 metric tons (2,204⅗ pounds), against 178,266 tons for the same month a year before.

In the ports of Rotterdam and Antwerp, where freight for western and southern Germany is transferred to the river Rhine transports, shipping business is very brisk. Large consignments of English coal and coke go daily to the mouth of the Ruhr to supply the large ironworks situated along that stream, or are transferred by railroad farther inland. The river freight rates have advanced in consequence of this great press of business. In spite of the rise in the price of the imported English coal and the higher transportation charges, the demand for foreign coal and coke increases, and will not show any abatement for months to come.

According to official statistics, the imports of foreign fuel during the months of January and February last were: Brown coal, 586,588 metric tons; coke 88,174 tons; anthracite and bituminous coal, 734,977 tons.

Bitter complaints are made by the big consumers against the syndicate which controls all the mines, for continuing to ship coal to Belgium and Holland, while home industries have to shut down or curtail manufacture, although they make great sacrifices to fill orders by buying coal and coke from dealers at exorbitant prices whenever it can be procured. In some cases, dealers charged the works double the rate they should have taken, according to the syndicate's opinion.

Smaller buyers, such as teachers, clerks, officials, and the working population, who buy a few hundredweight at a time, have to pay still more, and are consequently compelled to be sparing of heat. The syndicate has come out in a circular to the dealers, inveighing against the practice of charging exorbitant prices, and threatening to resort to strong measures if these practices are not stopped.

Soft coal by the carload is worth here now about $5.75 per metric ton; coke, by carload, about $9.25 to $9.50 per ton, but coke in large quantities can not be had at any price. It is even hard to get (for heating dwellings) by the single wagon load, containing 40 to 50 hundredweight.

Many impartial and intelligent people hold the coal-mining syndicate largely responsible for the existing crisis, charging it with having pursued a restrictive policy in mining and with shipping coal abroad in order to keep the market bare and the home price steady.

The total amount of coal which was brought to the city of Frankfort by rail and river in 1898 was 794,559 metric tons. I have not seen any published statement of the amount brought in during the past year.

I have addressed most of the leading wholesale coal dealers in this city for information, and pointed out that—

(1) The import of American coal on a large scale would relieve the distress and be of great benefit to the industries and to the private consumers of coal in Germany.

(2) There are in the United States immense deposits of the best quality of both anthracite and bituminous coal, which, on account of lying almost on the surface of the ground, can be sold cheaper than English or German coal, and with transportation by suitable vessels (specially built for this service) would be nearly as cheap as on coal imported from England.

One of the answers received in reply to my letters of inquiry estimates the annual arrival of coal at Frankfort at about 1,000,000 tons. Another (from one of the Frankfort gas companies) says: "We have, years ago, tested a lot of Kentucky coal, but it did not prove satisfactory; we however watch with great interest the movements in coal."

Most of the replies from these dealers are noncommittal and appear to be dictated by fear of the syndicate, which has a tight hold upon them, and has probably already shown its disapproval of American coal imports into this country.

SIMON W. HANAUER,
Vice-Consul-General.

FRANKFORT-ON-THE-MAIN, *April 6, 1900.*

SUPPLEMENTAL.

English coal and coke amounting to 230,222 metric tons (of 2,204⅗ pounds) were shipped to the port of Bremerhaven (Bremen) during the year 1899, valued at 3,334,789 marks ($793,679). The receipts of foreign coal during the first quarter of 1900 have increased heavily, but I have not yet obtained statistics.

At the port of Hamburg the receipts of English coal[1] during 1899 were 2,420,157 metric tons, and for the first quarter of 1900, 608,341. The shipments are constantly increasing, as the following shows: January, 150,495 tons; February, 167,314 tons; March, 290,532 tons. So are the prices, which for these three months averaged, respectively, 18.27, 19.60, and 22 marks ($4.35, $4.67, and $5.24) per ton.

The annual report of a leading coal shipping house at Hamburg says:

> The experiments which have been made in importing American coal into Europe have proved highly successful, and with better arrangements for ocean transportation,

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[1] Ship freights on coal from English to German ports are about 6½s. per ton.

which will be made, the use of this coal will attain vast dimensions. Already large consignments of American coal have gone to Italy and ports along the Mediterranean, which heretofore have received their supplies from Wales and Newcastle. Some of the large steamship companies have experimented with coal oil and coal dust as substitutes of coal for firing boilers; if these tests should prove successful, the coal market will become somewhat relieved.

The receipts at Hamburg of German coal during 1899 amounted to 1,645,800 tons, brought by rail from the Westphalian (Dortmund-Essen) district. As railroad freight is more costly than sea carriage, these figures and reports show a great future for American coal in Germany.

The coal famine still exists, and is illustrated by the fact that the city of Mainz, when lately advertising for bids to supply the municipal works and buildings with coal, did not receive a single offer or reply.

To-day I received two requests for addresses of American coal mining companies, one from Remscheid, Germany (Heinrich Stein, a coal shipper), saying:

> One of our firm, who for years has supplied Italian markets with English coal, will proceed at the end of this month to New York, to open business connections with American coal companies. We have negotiated with Italian railroads to furnish them with coal.

The other inquiry came to me from an English coal-shipping house.

SIMON W. HANAUER,
Vice-Consul-General.

FRANKFORT-ON-THE-MAIN, *April 7, 1900.*

AMERICAN COAL IN FRANKFORT.

After diligent efforts, I succeeded in obtaining accurate details of the kind and amount of American coal that has come into this consular district, the whole consisting of sample lots ordered by the Frankfort-on-the-Main Gas Company, as follows:

(*a*) Breckenridge gas cannel coal of Kentucky; received through coal shippers in Leith, Scotland, and a firm in Rotterdam and Mannheim during the years 1887 and 1888, in three different lots ranging from 20 to 300 metric tons (of 2,204.6 lbs.) each.

(*b*) Warsaw cannel coal from Ohio; 50 metric tons came through a Hamburg coal shipper in 1888.

(*c*) American Black Dome Boghead cannel coal; 60 tons were bought of a Sheffield firm in 1889.

(*d*) American Cannelton coal; 50 tons were bought in 1891 from a coal-shipping firm in Bingerbrueck on the Rhine.

(*e*) American Bear Creek cannel coal; in same year same quantity was bought from same firm.

All these sample purchases were subjected to analytic tests and carefully tried by this Frankfort gas company, but were found not equal to

Scotch cannel coal in their light-producing capacity, or respecting the amount of sulphur and the ashes in the coke. Some of these sample lots contained too much pitch, making them difficult for gas production.

In samples quoted under letters *a*, *b*, *c*, and *d* the ash residue ranged between 21.7 and 31.6 per cent, making the slack unsuitable for fuel, which latter is quite an important consideration for German gas companies as a valuable by-product. Consequently, these experiments with American coal did not prove profitable or satisfactory when taken in connection with the prices paid, which were not low, and therefore offered no inducement to order large quantities.

The director of this gas company tells me that once, in 1890–91, he bought a large quantity of English (Walridge & Silksworth) Maudlin seam coal. This was done solely as a precautionary measure, in order not to be caught short of coal; but the experience derived from the use of this English purchase leads the director to say he would not repeat it excepting in cases of dire necessity.

I have also, since my last report, communicated with about twenty of the principal wholesale dealers in this city. Some of these I interviewed personally, and they expressed themselves as hopeful of introducing American coal into Germany. The written replies to my inquiries were very guarded and evinced fear of the syndicate.

To supply Europe with our coal is no more of an illusion than to supply it with American grain, meat, and iron. But to make this coal movement successful and perpetual, a powerful combination must organize and conduct it on a large scale, both as far as the production and steady delivery of the coal (which must be of standard and even quality) and the cheapness and sufficiency in the mode of ocean transportation are concerned.

As to the latter, vessels expressly built for this purpose, including sailing vessels of large tonnage are essential; and they must be directed to points from which return cargoes can be had, so as not to put the entire cost of the round trip on the coal.

An enterprising company can, I think, obtain for return freights lemons and oranges and goatskins from Italy, ores from Spain, chemicals, cement, etc., from German ports.

New enterprises are always difficult at the start, but I am confident that before many years, the American tourist in continental Europe will find hotels, dwelling houses, and public buildings heated by American stoves which burn American coal, and also learn that the latter is largely used by factories, foundries, railroads, and steamboats.

SIMON W. HANAUER,
Vice-Consul-General.

FRANKFORT-ON-THE-MAIN, *April 25, 1900.*

AMERICAN COAL FOR EUROPE.

The European press has of late been reporting that American coal has been offered to Europe and that large quantities have been shipped to England and France. It is also stated, apparently by interested parties, that the quality is unsatisfactory. It would seem that the introduction of our coal depends only on cheap rates of transportation from America, provided the price for German and Austrian coal remains at the prevailing high rates.

If it be possible to obtain better ocean rates on coal than heretofore, if they were reduced perhaps 50 or 75 cents per ton, trade in American coal could be expected. The German Coal Syndicate, a well-organized and powerful organization, would doubtless fight competition with all the means at its disposal.

Many people whose opinions are entitled to consideration state that the high price of coal in Germany is not due to a natural shortage of coal, but to skillful manipulations by the coal syndicate for the purpose of raising the price of its product, and that it would sell at any cost in order to keep Americans out of the German market.

RICHARD GUENTHER,
Consul-General.

FRANKFORT-ON-THE-MAIN, *May 7, 1900.*

COAL PRODUCTION OF PRUSSIA.

The coal production of Prussia last year is returned as 94,775,582 tons, against 89,542,128 tons in 1898, showing an increase of 5,233,454 tons, or 5.82 per cent. Out of this total, the Dortmund district contributed by far the largest proportion, viz, 54,641,120 tons; and its increase is also the most considerable, having been 3,639,569 tons, or 7.14 per cent, as compared with the quantity produced in 1898. In Upper Silesia the production, 27,963,442 tons, shows an increase of 1,110,182 tons, or 4.13 per cent; and the Bonn district produced 11,501,220 tons, with an increase of 590,057 tons, or 3.51 per cent. Last year the lignite mines, working in which has greatly increased, put out 28,466,212 tons, against 26,064,543 tons in 1898, showing an increase of 9.21 per cent.

RICHARD GUENTHER,
Consul-General.

FRANKFORT-ON-THE-MAIN,
June 19, 1900.

INTRODUCTION OF FUEL-SAVING FURNACES.

At a recent meeting of large consumers of coal at Dresden, the question of importation of American coal was discussed at length.

It was agreed to agitate for the introduction of more economical furnaces. The main purpose of this report is to call the attention of our American manufacturers of fuel-saving devices to the present opportunity to introduce their furnaces in Germany. If they are desirous to enter this field, they should lose no time in doing so; they should not rely upon correspondence, but send over competent men at once and canvass the field.

Following is a list of large coal dealers who have written me that they are willing to handle American coal; our people wishing to ship coal to Germany can correspond with them directly: W. A. Klein, 15 Schillerstrasse; Gebr. Haldy, 16 Kl. Kornmarkt; Franz Staudt, 39 Niddastr; F. W. Pampus & Co., 29 Taunusstr; Ed. Lejeune, 15 Schaefergasse; Karl Ehrhardt, 8 Krögerstr; Anton Fulda, 16 Neue Mainzerstr; Gebr. Doertelmann, Zeil 9; Wm. Egan & Co., Rhein. Transp. Ges., 37 Kaiserstr; Frankfurter Gas-Gesellschaft; Imperial Gas Association, 23 Rossmarkt, all of Frankfort-on-the-Main, Germany; Bernhd. Blumenfeld, Hamburg, Germany; Bodo, Forcht & Thomas, Bremen, Germany; Heinr. Stein, Remscheid, Germany; Stock & Fischer, Bingerbrück, Germany; Fried. Veit, Carl Jungke, Bremen, Germany; Raab, Karcher & Co., Kochstaden, 4 Strassburg, Germany; Dr. Kurt Kuntze, Ostra Allee 9, Dresden, Germany; Emanuel Hess, Mariengasse 15, Prague, Bohemia, Austria; F. H. Boesche, Guerickstr 8, Magdeburg, Germany; J. Kogel, Nienwe Herrengracht 21, Amsterdam, Holland; A. A. W. van Reede, Rotterdam, Holland; Dr. M. Frenzel, Kalkwerk Stendnitz, Dornburg, Germany; A. W. Schönherr, Dresden, Germany; Gustav Schniebel & Co., Berlin, Unter den Linden 43; Adolph Harloff, Gustavsburg, Mainz, Germany.

RICHARD GUENTHER, *Consul-General.*

FRANKFORT-ON-THE-MAIN, *May 25, 1900.*

PROTECTIVE MEASURES AGAINST COAL TRUSTS.

Industrial enterprises and individual consumers, i. e., the public at large, have, during the last year, been seriously hampered and injured by the action of the rapidly increasing trusts, which in Germany have extended to and taken hold of nearly all branches of manufacture and of all articles of consumption. Individuals have been led to combine in order to defend themselves against the syndicates.

The Barmen Chamber of Commerce having invited the other chambers of commerce of the Rheinish districts to cooperate with it against the action of the coal syndicate, these bodies, representing industrial western Germany, met this week in convention in Cologne and adopted the following resolutions: First. To demand of the coal syndicate that it bind dealers who obtain their supplies from the trust not to exact more than 10 marks ($2.25) advance per 10 tons (2,204 pounds) on the price paid by dealers to the trust, where the contract for the year stipulates a weekly delivery of less than 20 metric tons. On contracts for larger deliveries, the advanced profit is to be only 5 marks for each 20-ton lot.

Second. That the syndicate, upon expiration of its present contracts for coal delivery to foreign countries, shall not renew same as long as home demands for coal remain unsatisfied.

The convention determined to appeal to the Government to intervene in case the coal trust should refuse to comply with these demands.

The Government, owning all lines of transportation (railroads and canals), can at any time stop the exportation of coal by advancing the freight rates.

Many of the large ironworks in Germany are now trying to acquire possession of coal mines so as to be independent of the coal trust for their requirements in this necessary staple.

SIMON W. HANAUER,
Vice-Consul-General.

FRANKFORT-ON-THE-MAIN,
June 7, 1900.

HAMBURG.

When in the fall of last year, in consequence of the outbreak of the South African war, the British navy had to reserve exceptionally large quantities of the best coal for its own consumption, there was naturally a rise in prices of coal throughout Europe, which in the course of a few months took a very critical turn, because of the existence of a strike among the coal miners of Saxony, Silesia, Moravia, and Bohemia, causing shipments of coal from such mines to the industrial districts of south, middle, and east Germany to be practically suspended, so that the deficit had to be replaced by Westphalian and English coals. An unusually marked scarcity of coal and enhancement of prices took place throughout Germany, especially in Hamburg, because large quantities are transhipped here to the interior. Industrial plants were compelled to use inferior fuel; many were obliged to shut down for the time being.

The question arose, in what manner the deficit could be overcome, and whether it would be possible, in the event of a long duration or a repetition of such a crisis, to obtain coal elsewhere, and attention was fixed on American supplies. Importers of coal in this city received daily inquiries from German industrial establishments desirous of knowing at what prices good American coals could be purchased, and how such prices compared with those of German and English products. At the same time, the attention of American coal exporters was drawn to the possibility of the opening of a favorable market in this line. In this way a stirring activity originated; American consulates received numerous inquiries from coal exporters in the United States as well as from local importers, dealers, and factories in Germany—the former desirous of obtaining the names of coal importers in Germany, and the latter anxious to know the names of reliable and efficient American coal miners and exporters.

The first question is whether American coal can be supplied in Germany at a rate sufficiently cheap to compete with the German and English products, and whether American coals, as far as their quality is concerned, compare favorably with those produced in Germany and England.

Hamburg imports almost all kinds of German and English coal. The following statistics show the quantity handled and consumed in this city:

	Imports.				Exports.			
	1898.		1899.		1898.		1899.	
	Tons.		*Tons.*		*Tons.*		*Tons.*	
By sea	2,055,248	$6,124,104	2,428,879	$7,838,551	19,708	$71,719	27,317	$101,269
By rail and from the Upper Elbe	985,423	3,048,897	997,943	3,325,146	432,357	1,337,712	575,397	1,917,221

The different sorts of coal used in Hamburg are unscreened large, large, unscreened small, nuts, anthracite large, and anthracite nuts. The current sizes of nut coals are singles, hazel-nut size, doubles, walnut size, and triples, double walnut size.

The prices paid by Hamburg coal importers are as follows:

Prices per ton on contracts for present year.—Large, about 15s. to 15s. 6d. ($3.65 to $3.77); unscreened, about 13s. 3d. to 13s. 6d. ($3.22 to $3.28); small, about 11s. to 12s. ($2.68 to $2.92); nuts, about 15s. to 17s. ($3.65 to $4.14); anthracite, large, about 23s. to 25s. ($5.60 to $6.08) ;anthracite, nuts, about 26s. ($6.33).

Prices per ton during the strike in Saxony, Bohemia, etc.—Large, 23s. ($5.60); unscreened, 21s. ($5.11).

Present prices per ton.—Large, 19s. to 20s. ($4.62 to $4.87); unscreened, 17s. to 18s. ($4.14 to $4.38).

These prices are calculated "c. i. f. Hamburg," so that freight, insurance, and costs are paid by the seller, and only the charges for unloading, which amount to about 1s. to 1s. 6d. ($0.245 to $0.365) per ton, are to be borne by the purchaser, a duty on foreign coal not being charged in Germany.

From these prices, it can easily be seen whether there is a possibility of a successful competition of American coal with German and English products. At present, the main obstacle is the high freight rates from the United States to Germany, which vary between 12s. 6d. and 16s.

($3.04 and $3.99), the former rate being exceptionally low. It is claimed here that it was accepted by the Holland-American Line for a cargo of American coal, consisting of 6,000 tons, destined for the Rhine districts, but that the company has declined to undertake further shipments at such a low price.

Up to the present date only one cargo of American coal, consisting of 4,000 tons, has been shipped to Hamburg. This was looked upon by the importer as a trial shipment and turned out favorably both for heating and coking purposes. The experiments for coking purposes were made by the Norddeutsche Kohlen- und Koks-Werke Actiengesellschaft, of Hamburg, which establishment annually consumes about 180,000 tons of coal for that purpose. The same importer has given further orders for American coal of different kinds, which, however, have not yet arrived.

Anthracite coal has not heretofore been imported into Hamburg from the United States. It is therefore difficult to state whether or not the same compares favorably with that from English mines. A local importer says the English is superior to the American, which, however, would not render it impossible for anthracite coal from the United States to be successfully introduced on the German market, especially as the prevailing scarcity is severely felt. In Hamburg itself there exists only one anthracite-crushing plant, Anthracit Werke Gustav Schultze, Gesellschaft mit beschränkter Haftung, which consumes about 60,000 to 70,000 tons per annum. It is claimed that the annual increase in consumption of anthracite coal in Germany is about 25 per cent. This may easily be proven by the fact that, particularly in residence houses in Germany, the old-fashioned Dutch tile ovens, in which only bituminous coal is used, are being gradually discarded and replaced by the so-called "continual burning stoves" of American style.

For heating and steam-producing purposes, experiments with American coals have been made by the Hamburg-American Line, which for several months, in consequence of the scarcity and high prices of coal in Europe, has imported American coal for its own use, thus avoiding the high prices charged in Hamburg and saving freight by filling with coal holds for which other cargo could not be obtained. Experiments made by the Hamburg-American Line show, it is said, that American coals have an average inferior heating power of 10 to 12 per cent in comparison with German coals, English coals, on the other hand, being superior to the German. Even if this is true, it does not follow that it will be impossible to open a new market for American coal in Germany, but, above all, lower freight rates must be obtained. As already mentioned, the lowest bid heretofore made was 12s. 6d. ($3.04) per ton, whereas the freight on coal from English ports to Hamburg is only 5s. to 5s. 6d. ($1.21 to $1.34) on the average. This line of business should receive careful attention, even if the profits are not large at the beginning.

It is undoubtedly true that the United States can supply the world with coal for many centuries to come, and will do so ultimately, but it would appear to an observer that conditions at present are somewhat artificial, and that when affairs resume their normal relations as to the war and strike, unless coal is carried in American bottoms at lower rates of freight, its introduction will be gradual. The amount of general produce exported from the United States is so great that it now taxes the carrying capacity of the trans-Atlantic liners and renders it impossible to secure rates enabling American coal to profitably compete with that of England and Germany under normal conditions.

Finally, it may be stated that the tests made by the Hamburg-American Line—practically the only experiments made in this city in this direction—can not be considered in any way conclusive, as this company receives its supply of coal from certain coal districts, while it is generally recognized that in the United States—in Pennsylvania, New York, Kentucky, Virginia, and many other States—coal is mined which is equal, if not superior, in heat and steam producing qualities to that of any other section of the globe.

HUGH PITCAIRN, *Consul.*

HAMBURG, *June 5, 1900.*

KEHL.

I can not find that any American coal has ever been used in this district. There is undoubtedly, however, a great shortage of coal of certain sizes, especially soft coals and what they here term "fat nut coals." I can not obtain any statistics of the amount of coal used in this district, nor of the amount of imported coal consumed, of later date than 1897, which, under the present conditions of the coal industry, would be very misleading.

The present sources from which coal is obtained here are the Ruhr district for soft coal, and Saar and Belgium for hard coal. There are no mines in this district, and no coal exported. The prices that the coals needed here would command at present are, approximately, nut coal 180 marks ($42.80) and range coal 170 marks ($40.47), per 10,000 kilograms (22,046 pounds), which constitute a carload here. I am not aware that there is any objection to American coal, and with regard to transportation would say that the coal is delivered direct to Strassburg by water, and in fact throughout Alsace-Lorraine, by a system of canals. There is, however, one point not to be overlooked. It would be useless to attempt to sell coal here by means of circulars or letters. The exporters would have to send agents with samples and guarantee that the quality should be equal to the sample; moreover, they would have to sell on the same terms as to payment, etc., as are customary among German coal dealers.

A. WOOD, *Consul.*

KEHL, *April 5, 1900.*

MAGDEBURG.

The present scarcity of coal in Germany is due to three principal causes: (1) Strikes in Germany and Bohemia. (2) Increased demand for coal, owing to the growth of Germany's manufacturing industries. (3) Decreased importations from Great Britain, owing to the war in Africa.

Germany does not produce enough coal for its own use, the deficiency being supplied in some sections by English pit coal and in others by Bohemian brown coal. In buying coal Germans are hard to please, and when they find a sort which suits them, only absolute necessity or a distinct advantage in price will induce them to make a change. The strike in Bohemia has, however, led many manufacturers who had formerly used only Bohemian brown coal to try black coal as a substitute. If they find the experiment successful, the demand for pit and anthracite coal will increase. The German coal used in this vicinity comes at present chiefly from Westphalia. So far as I have been able to learn, American coal has never yet been tried in this consular district.

In attempting to extend our coal trade to this market, it must be clearly borne in mind that owing to high railway freight rates river transportation is necessary. Accordingly, Hamburg controls importations of foreign coal for all places in the valleys of the Elbe and its tributaries. If, therefore, we mean to succeed, it is in Hamburg that our coal exporters must make their connections, as it will be found impossible to do any direct business with Magdeburg, Berlin, and other inland coal markets.

The present time is undoubtedly a favorable moment for making the experiment, as coal is both scarce and dear and the English have now unusual naval demands to meet. Nevertheless, if we wish to win a permanent market in Germany, we must prove with the first shipments that we can successfully compete with England in quality, condition, and price. All coal must be clean and free of slate, and anthracite coal must be washed. Coal which is rich in gas may perhaps also be successfully imported, if its value is practically demonstrated.

One danger which our exporters must consider is the possibility that after the war in Africa is finished, English mine owners may temporarily render competition difficult by reducing prices, counting upon the advantage secured to them by their nearness to the German market. Our exporters, however, know whether they are in position to maintain the competition long enough to open this market permanently for the sale of American coal. They should first send their expert representatives here to ascertain exactly what the Germans want, what they are willing to pay for it, and whether American coal can be delivered in Germany at or below the prices which prevail under normal circumstances.

Under Nos. 13a and 34 of the German customs tariff, coal is free of duty. I am also informed by the tax director of the province of Saxony that no restrictions are placed upon the importation of coal.

The present price of coal brought up the Elbe River from Hamburg in large boats (Kaehne) is per carload of 200 centners (10,000 kilograms): Best English pit coal, 260 marks ($61.88) per 200 centners; anthracite nut coal for American self-feeding stoves, 320 marks ($76.16) per 200 centners.

These are prices paid for coal in the boat (Kahn) at Magdeburg, purchaser paying cost of unloading.

River freight rates in canal boats (Kaehne) from Hamburg to Magdeburg are 26 to 28 pfennigs (6 to 6⅔ cents) per 100 kilograms in shiploads, but they fluctuate with the amount of water in the river, and are also influenced by the size of the boat used and the amount of space available.

Railway freight rates for coal in lots of 200 centners from Hamburg to Magdeburg amount to 67 pfennigs (16 cents) per 100 kilograms. The rate from Bremen is 71 pfennigs (17 cents). For the encouragement and protection of the German mining industry, railway freight rates are much higher from the seaports than from the mining districts.

GEORGE H. MURPHY,
Vice-Consul.

MAGDEBURG, *April 20, 1900.*

SUPPLEMENTAL.

I inclose a clipping from the commercial columns of the Magdeburger Zeitung relative to the business done last year by a German coal company, whose mines are located in this vicinity. The figures given in the report will doubtless be of interest chiefly so far as they throw light upon the conditions prevailing in Germany which make coal mining both possible and profitable. Thoroughness in the scientific utilization of materials is one of the chief causes of Germany's commercial success. The chance of establishing in Germany a permanent market for our coal will be much increased if it is found to be good for something besides direct burning; i. e., if it proves to be rich in gas, tar, and oil.

GEORGE H. MURPHY,
Vice-Consul.

MAGDEBURG, *May 15, 1900.*

THE RIEBECK MINING COMPANY OF HALLE.

[Extract from the annual report of the company.]

Owing to the public discussion of the theme, "scarcity of coal," the opinion has spread that our profits have been unusually large in the past year. This is not the case. On the contrary, the few additional pfennigs and fractions of pfennigs added to our selling prices did not nearly cover the increase of outlays for materials and wages. On the other hand, the following factors were favorable to our business: The increase by 2,000,000 marks ($476,000) of our capital stock at the close of the preceding year brought in so much cash that the income from interest was very favorably affected. Likewise, considerable profit accrued through the rise in selling prices for paraffin and mineral oils. Furthermore, we had in this year no unusual losses due to elementary causes, such as reduced our surplus last year to the extent of 200,000 marks (about $50,000). We are accordingly able to declare a dividend of 14 per cent on the increased capital stock. Our coal production last year increased from 30,921,916 hectoliters (3,134,124 tons) to 34,340,977 hectoliters (3,471,630 tons). Of this, the amount sold as raw coal was 5,376,556 hectoliters (544,771 tons), against 4,426,953 hectoliters (448,545 tons) in the preceding year. The sale of pressed coal amounted to 60,547,000 blocks (58,632,000 in the preceding year). The sale of briquettes amounted to 3,638,630 double centners (802,172,370 pounds) against 3,276,589 double centners (722,356,811 pounds) in 1898, or about one-tenth as much in tons. [The pressed coal and briquettes are manufactured from coal dust.] The production of coal tar was increased by the adoption of a new process from 228,645 double centners (50,407,079 pounds) to 248,358 double centners (54,753,005 pounds). The quality was also slightly better than in the preceding year. The crude coke produced by this process found a ready sale at somewhat higher prices. The sales of tar distillation products were satisfactory. There was a strong demand throughout the year for all sorts of mineral oils, so that during the busiest season it was difficult to fill the orders. For the loss caused us by the introduction of a mixed gas (oil gas and acetylene) for lighting railway cars, we have been richly compensated by an increased demand for our oil in the municipal gas works of Halle. The conditions prevailing in the paraffin market were unusually satisfactory, owing to the cessation of the pressure caused by the flooding of the European market from America, which had resulted in the sinking of prices to a disastrous extent. The price of American paraffin rose about 100 per cent. Half-refined wares fusible at about 52° C., which fifteen months ago sold for 31 marks ($7.38) per 100 kilograms c. i. f. at German seaports, have increased in price from 35 marks ($8.33) to 67 marks ($15.95). By this change in the paraffin market, paraffin candles have also been beneficially affected. Negotiations have taken place between all the candle makers of Germany for the purpose of simplifying the packing of candles and agreeing upon uniform weights for such packages. This discussion of kindred interests was, moreover, extended to the solution of other questions, such as the regulation of conditions of sale. Another step resulted in the formation of the "Union of Stearine and Candle Manufacturers of Germany," which we have joined. In a movement of this kind, it is obvious that the price question could not be ignored, and consequently our contracts for delivering candles in the business year 1900–1901 are already influenced by the agreement reached. The increase of 12 to 15 marks ($2.86 to $3.57) per double centner thus secured falls far short of the advantage which in the meanwhile paraffin and stearin have achieved; but we were unable to change the established custom under which our contracts for the year are made in January. For the by-products of distillation we had good use, as heretofore.

THE GERMAN BROWN COAL MARKET.

Domestic raw coal.—During the first quarter of 1900, the influence of the strikes was much felt in the coal districts of Central Germany.

While some districts suffered considerably owing to the entire cessation of work, others for this reason enjoyed unusual advantages, which caused feverish activity in business, the production in some cases being much increased.

In the vicinity of Halle, the general situation was favorable except at the individual mines which were affected by the strike. The severe winter and the extraordinary demand for fuel increased business in some cases as much as 7 per cent, but there was a corresponding loss at the mines where work was stopped. The small rise in prices secured on new orders was more than balanced by increased expenses.

In the Bitterfeld district, owing to strikes in Bohemia and in the kingdom of Saxony, sales increased 20 per cent or more. Somewhat better prices were obtained.

The Weissenfels-Zeitz district suffered from the strike, the falling off of business at some mines in comparison with the preceding year amounting to 10 per cent. This deficiency was about covered by means of increased activity at other mines. Here, also, better prices were obtained on new orders. Similar conditions prevailed in the Meuselwitz district.

The brown coal works in the kingdom of Saxony, which were not affected by the strike in the pit coal mines, enjoyed in like manner an increase of business amounting to 20 per cent more than in the corresponding quarter of 1899.

In Niederlausitz the sales of raw coal were small. This was not the case in the Frankfort-on-Oder district, where about two-thirds of the mines profited by the coal famine, their business increasing as much as 30 per cent. The other third suffered to the extent of 15 per cent, partly on account of unfavorable transportation conditions and partly in consequence of business difficulties. Better prices were obtained on some new orders.

The sales of the Silesian mines were from 5 to 10 per cent larger than in the corresponding quarter of 1899.

In the district of Magdeburg, Halberstadt, Anhalt, and Brunswick the influence of the strikes in Bohemia and the kingdom of Saxony was especially noticeable. These mines were expected to cover the deficiency in the coal supply caused by the strikes above mentioned. By means of increased activity, some mines were made to produce from one-third to one-half more than in the corresponding quarter of 1899. Better prices were also obtained on new orders.

In like manner, in the province of Hessen sales increased, but in individual cases there was a falling off due to business difficulties. New orders brought better prices.

Reports from the brown coal works in the province of Hanover are favorable.

Briquettes.—The trade in brown coal briquettes was subjected to the same conditions as that in raw coal. Reports from all districts show that the demand was active and in part feverish. In the district of Halle, the demand could not be satisfied at times. In the Bitterfeld and Weissenfels-Zeitz districts, the stock was exhausted. A similar state of affairs existed in the Meuselwitz district and in the kingdom of Saxony. In Niederlausitz, the demand was particularly noticeable, because Berlin appeared in the market with its huge demands. The deliveries accordingly rose 8, 20, and 30 per cent over those in the first quarter of 1899. In Frankfort-on-Odor, Hessen, and Hanover the demand was likewise larger than in 1899. In the districts of Magdeburg, Halberstadt, Anhalt, and Brunswick the same pressure was observed as has been mentioned above in connection with raw coal. The works were crowded with orders and immediate deliveries were impossible. In other districts, an increase of 5 to 10 per cent in prices was readily allowed. The advantage of the excited demand was, however, enjoyed less by the works than by the dealers, and so the strike brought profit to some nonparticipants (dealers who were not producers) while it injured others, namely consumers.

Pressed coal.—The small supply of pressed coal which had been left on hand from 1899 was soon used up, shipments being sent from the province of Saxony as far as Dresden. Prices rose about 5 per cent.

Mineral oils.—In like manner, in the first quarter of 1900 there was an increased demand for mineral oils. All sorts of oils found a ready sale, with which at times the production could not keep pace.

Grüde cokes.—The general coal famine had also a profitable effect on grüde cokes, the demand being more active than usual at this time of the year. In small households, the scarcity of other fuel made grüde cokes a welcome substitute.

Paraffin and candles.—In the first quarter of 1900 favorable conditions continued in the paraffin market, and prices rose. In consequence of the continuance of frost weather, the production of soft paraffin was satisfactory. There was a good demand for candles produced from coal.

By-products.—Heavy oils were sold at better prices. The demand for asphalt, etc., was also good.

Bohemian coal.—On account of the long-continued strike in Bohemia, the importation of Bohemian coal into Germany was very small. The amounts imported were:

Month.	1899.	1900.	Per cent.
	Tons.[1]	*Tons.*[1]	
January	557,353	536,473	−4
February	616,655	50,150	−90
March	742,954	224,592	−70

[1] 1,000 kilograms, or 2,204.6 pounds.

The importation by means of the Elbe River stopped almost entirely, partly on account of the strikes and partly owing to unfavorable navigation conditions.

Prices in Magdeburg, per ton (1,000 kilograms), were:

Month.	For lump coal.		For nut coal.	
	Marks.	United States equivalent.	Marks.	United States equivalent.
January	14	$3.33	12	$2.86
February	22	5.24	20	4.76
March	22	5.24	20	4.76

It was impossible to satisfy the demand.

Scarcity of railway cars.—Owing to the unusual demand in German brown coal districts, caused by the Bohemian and Saxon strikes, the Central Railway car office in Magdeburg was at times embarrassed by the scarcity of cars. Fortunately, however, such stoppages never lasted more than a few days.

Condition of laborers.—As can readily be seen from what has been said above, the condition of the workmen was not an enviable one. In addition to the chronic scarcity of laborers, matters were made worse by the extension of the strikes into Germany. These were undoubtedly instigated by social-democratic agitators. Work was stopped in about 12 brown coal works, which threw 1,300 men out of work from three days to three weeks. Their demands, everywhere the same, were an advance of 10 per cent in wages, shortening of the working day by one hour, etc. The strike was brief and unsuccessful in the brown coal works.

Geo. H. Murphy, *Vice-Consul.*

Magdeburg, *May 23, 1900.*

MAINZ.

There is a decided demand for foreign coal in Germany, as the local coal mines are unable to supply the market. This is not due to any unforeseen calamity which will pass over shortly, but to the unprecedented development of German industries, and the present indications are that the scarcity of coal will continue as long as these progress, as the output of the German mines can not be materially increased.

There is a large demand for both bituminous (Fettkohle) and anthracite coal, and it seems to be only a question of freight from the United States to Rotterdam, the port most convenient for these parts, whether the United States can compete with England or other coal-producing countries.

The price for Westphalian bituminous coal, mine run, is to-day 18 marks per metric ton ($4.28 per 2,204.6 pounds avoirdupois), f. o. b.

Mainz. The prices for anthracite coal, stove and nut size, per 2,204.6 pounds, are to-day as follows:

Description.	Marks.	United States equivalent.
Westphalian coal at mine	24.00	$5.71
Freight to Mainz	3.50	.83
F. o. b. Mainz	27.50	6.54
Aix-la-Chapelle coal at mine	22.00	5.24
Freight to Mainz	7.00	1.67
F. o. b. Mainz	29.00	6.91
English coal, c. i. f. Rotterdam	25.00	5.95
Freight to Mainz	3.50	.83
F. o. b. Mainz	28.50	6.78

According to quotations from American exporters which I have seen, but which seem to me very high, our coal would stand thus: United States coal, red ash, f. o. b. Philadelphia, 21 marks ($5) per 2,204.6 pounds; freight from Rotterdam to Mainz, 3.50 marks ($0.83).

From this it will be seen that it depends upon whether the freight charges from the United States to Rotterdam are less than 4 marks, or 95.2 cents, per metric ton of 2,204.6 pounds avoirdupois, in which case American coal can easily compete with English.

Anthracite coal is not used here as a boiler coal, and it would probably be difficult to introduce it for this purpose, as the grate bars here are arranged to burn bituminous coal and are not fitted to burn our "pea" coal.

Coal from the United States has not yet been used here, but one large dealer has just received a sample lot, which he had analyzed at once in order to compare it with German coal. He informs me that the quality is very satisfactory.

The coal mines of the Saar district are located in the consular district of Mainz, but this coal is used almost entirely for the manufacture of gas, and is also exported to France and Switzerland.

The coal used for general purposes in this district comes from the districts of Westphalia and Aix-la-Chapelle and from England.

There is no import duty on coal in Germany, but an octroi duty of 6 pfennigs per 50 kilos (1.4 cents per 110 pounds avoirdupois) is collected on all coal brought into the city of Mainz.

Coal for the Rhine districts should be shipped via Rotterdam, and all quotations should be made c. i. f. Rotterdam.

WALTER SCHUMANN, *Consul.*

MAINZ, *April 10, 1900.*

MANNHEIM.

Mannheim being the principal manufacturing center of this district and one of the most important in southern Germany, my investigations have been confined to this place. The city is on the Rhine, and with Ludwigshafen just across the river, has a population of more than 200,000, not including several good manufacturing villages just beyond the city limits. Mannheim has the finest docks on the Rhine. Large barges come to this port direct from Rotterdam, Antwerp, and Amsterdam, loaded with grain, petroleum, and other freight.

Upward of 1,800,000 tons of coal were brought to Mannheim in 1899 by river, mainly from the Ruhr coal district, near the Belgian frontier, west of Cologne. A smaller amount came from Westphalia. This coal is inferior in appearance, but is said to be a fairly good steam coal. I am advised on good authority that American coal used on ocean vessels is regarded as at least 5 per cent better than the Ruhr coal, sometimes used on the return trip.

The average price paid for coal by large manufacturers here during the past twelve months has been from 14½ to 15½ marks ($3.45 to $3.70) per ton of 2,220 pounds, on board barge at Mannheim and Ludwigshafen. Coal has sold at retail at as high as 20 marks ($5.76) per ton. Much complaint is heard as to the price charged. The output of the Ruhr mines being controlled by a syndicate, it is claimed that prices have advanced steadily.

Agents representing English coal have been here and are said to have placed some orders, though I was unable to verify the report or to learn the price quoted.

Manufacturers, as the case now stands, are wholly dependent upon the syndicate, and are naturally reticent about taking an active part in the agitation of the foreign coal question, though I am quite certain many of them would be greatly pleased with the introduction of American coal. The declared exports from this district to the United States are very large, amounting for the past quarter to $1,104,610.50, mostly manufactured articles. Naturally, manufacturers here feel friendly to the United States, and would not be at all prejudiced against our coal. Many of these concerns are of unquestioned responsibility, and would doubtless enter into contracts for our coal if the price would justify them in doing so and if they could be assured of a fairly constant supply.

The largest manufacturing concern here, and one of the largest in Europe, uses about 800 tons per day in summer and nearly 1,000 tons per day in winter. There are several other large consumers here or in the immediate vicinity. I believe good contracts on the terms I have stated could be secured now at from 14½ to 15½ marks ($3.45 to $3.80) per ton on board barge at Mannheim or Ludwigshafen, and that this price will not likely be lower. This is per ton of 2,205 pounds.

Freight rates from Rotterdam vary somewhat, according to the condition of water in the Rhine. One of the largest transportation companies here names the following rates per 1,000 kilograms (2,203 pounds): May, June, and July, 3.90 marks ($0.93); August and September, 4.65 marks ($1.11); October, November, and December, 5.65 marks ($1.35).

Another shipper tells me it will cost 3.50 marks ($0.83) per ton from March to July, and that the rate would be about 5 marks ($1.19) the balance of the year, except when the water was very low. These prices include the cost of transferring from the ocean vessels at Rotterdam to the Rhine boats. This transfer charge is figured at about one-half mark, or 12 cents per ton, which would seem to be a large estimate.

American shippers should quote prices on board steamer at Rotterdam, and leave it somewhat to the local dealers and consumers to make transportation arrangements from Rotterdam, as they would be likely to get a better freight rate than the American shipper could hope to secure.

H. W. HARRIS, *Consul.*

MANNHEIM, *April 10, 1900.*

SUPPLEMENTAL.

Since the date of my first report, I have investigated the matter somewhat more fully, especially touching the facilities for handling and storing large quantities of coal here. Just above the city limits, on the Rhine, extensive docks have been constructed in a neighborhood surrounded by manufacturing plants, and ample space is afforded for the storage of coal, with power and appliances for unloading. The docks and adjacent lands belong to a large company, which has spent several million marks in river and other improvements to attract manufacturing concerns in that locality. The managers assure me that they will furnish every facility for handling American coal at reasonable rates. The local coal syndicate has large storage space at this point, and is using part of the improvement company's dock, under a long-term lease.

The matter of introducing our coal here has awakened a lively interest, and if the freight rates will permit the coal to be landed here at from 15 to 15½ or perhaps 16 marks ($3.57, $3.69, $3.81) per ton, I am sure a ready sale can be obtained for it. While it is extremely doubtful whether at the published freight rates it is possible to compete with German coal here, I am of the opinion that an American shipper, if here, could get local parties interested with him and perhaps secure a decided reduction in the rate given me by the transportation companies whom I consulted. (The figures were given in my previous report on the subject.)

It is conceded that Germany will soon have to buy much of her coal abroad. The German coal producers realize this, and with the demand for coal constantly on the increase, I am assured that the importing of our coal in moderate quantities would meet with no serious opposition from the local coal interests, and that the present selling price would likely be maintained.

H. W. HARRIS, *Consul.*

MANNHEIM, *April 19, 1900.*

NUREMBERG.

The strike which broke out on January 19, 1900, in the coal districts of Bohemia, extending also to the neighboring coal mines of Saxony and lasting until the 19th of March, 1900, caused a great scarcity of coal in this consular district.

This strike is now over, but I am informed that scarcity of coal will be felt somewhat for the next two years, as even in ordinary times the output of the German coal mines is not sufficient to meet the increasing demand, owing to the flourishing state of trade and industries.

My consular district—the northern part of Bavaria—has no coal mines. The following sorts of coal are chiefly burnt here, viz: (1) Saxon coal for private households, from the neighboring coal mines of Zwickau; (2) Bohemian brown coal for factory use; (3) anthracite coal for so-called "American" household stoves; (4) coke for both private households, hot-water pipes, etc.

All the industrial establishments of Bavaria use Bohemian brown coal more or less. The consumption of this coal in my consular district is therefore immense—about 1,200,000 tons annually, American weight. The city of Nuremberg alone, with its numerous factories, is said to import 150,000 tons per year.

When, therefore, the strike broke out in January last, the coal dealers here had to look for other sources of supply. This led to an increased introduction of Ruhr coal, which had previously a small sale in this district, and also to the importation of English coal from the Welsh district. Both English coal and German Ruhr coal, best quality, from January to March, 1900, commanded about the same price, viz, $57 per 10 tons loco Mannheim.

Railroad freight from Mannheim to Nuremberg amounts to $15 per 10 tons, therefore price free Nuremberg would be $72. There is no import duty on coal in Germany.

In ordinary times, the average price for best Ruhr coal is about $34 per 10 tons, free Ruhr district; freight by rail direct to Nuremberg, $24; making altogether $58 per 10 tons.

I do not believe that our bituminous coal can supplant the Bohemian brown coal used here in factories. It is specially adapted for this use, as it does not destroy the gratings, while both English and Ruhr coal are said to be sharp, injuring the gratings by forming lumps which prevent the free passage of air.

Bohemian brown coal is, moreover, very cheap, the average price for best quality, egg size, being about $40 per 10 tons, free Nuremberg. The freight from the neighboring Bohemian coal mines to this part of Bavaria is very low.

However, I believe that American bituminous coal could fully replace the Rühr coal and the English coal.

England has sent 5,000,000 tons of both bituminous and anthracite coal to Germany during the past year; but this year, according to reliable reports, it will not be able to send more than 2,000,000 tons hither. This deficiency has to be made up, all the more as, even at ordinary times, the Ruhr coal district, with its daily output of 175,000 tons, can not meet the demand.

The present period offers, therefore, the best opportunity for introducing American coal into the German market, provided it can compete in price.

There is no doubt that this importation can be effected much more easily in places near the coast, as, for instance, Belgium, Holland, and northern Germany. Nuremberg lies far inland, and, therefore, the question of freight plays an important part.

Preference is given to the English coal as against the Ruhr coal, as the former is the harder of the two, and consequently stands transportation better.

The best way to bring American coal to southern Germany, including Bavaria, would be, I am told, to ship the product as it comes from the mines to Mannheim, via Rotterdam, where the lumps could be broken, washed, assorted, sifted, etc. Thereby too much breakage on the way would be avoided.

Mannheim is not only the center for importing American grain into southern Germany, but is also the seat of large coal-importing firms which have the necessary machinery for breaking, washing, assorting, and sifting coal. Immense quantities are continually stored at this place.

Our coal exporters should apply to these Mannheim firms, as Nuremberg dealers can not buy direct from the United States. They have to buy coal transhipped from Mannheim.

There is, it is true, one impediment in the way of introducing foreign coal here, and that is that the coal mines of the Ruhr district, which are all united in a syndicate, exercise a pressure on their customers to make them use only this coal, by asking higher prices of customers who buy foreign coal, or refusing to supply them at all.

It would be, therefore, advisable to approach only such firms in Mannheim or other German coal-import places as are not entirely dependent on the Ruhr syndicate.

For private households in my consular district, Saxon coal from Zwickau has the best sale, owing to the low freight from Zwickau to Nuremberg, only $17.50 per 10 tons. Coal from Zwickau, best quality, egg size, is sold here at present at $54 per 10 tons, free Nuremberg.

It is estimated that about 100,000 tons of both Zwickau and Ruhr coal are consumed annually in this city alone. The Zwickau district, however, is not very extensive, and is said to have a daily production of but 8,700 tons; and dealers complain continually that they never get the quantities desired.

Anthracite coal is chiefly used in private households. The anthracite from the Kohlscheid district, near Aix la Chapelle, Germany, has the best sale here. However, the consumption of anthracite coal is not very large. It amounts perhaps to 10,000 tons per year in this city.

The present price at which it is offered by dealers here is $69, free Nuremberg, for best quality, egg size. Freight from Kohlscheid to Nuremberg, which is included in this price, is $23 per 10 tons.

English anthracite, too, has a sale here owing to its superiority, being harder than German anthracite. It is bought by dealers here at about $62.50 per 10 tons, loco Mannheim. To this, freight by rail to Nuremberg should be added, amounting to $15 per 10 tons.

It is estimated that about 500 tons of English anthracite are imported annually into this consular district. I think that American anthracite would certainly find a sale here.

About 60,000 tons of coke are consumed annually in this city, partly in factories, partly in private households. Forty thousand tons of coke are produced annually by the city gas works. The wholesale price of coke in normal times is $52 per 10 tons; at present it is $76.

No American coal has as yet been imported into my consular district.

GUSTAV C. E. WEBER, *Consul.*

NUREMBERG, *April 4, 1900.*

PLAUEN.

Owing to the late strikes in Saxony and Bohemia, the prices have advanced 19½ per cent over those of last year, and the general opinion is that they will rise still further.

There is a certain amount of American coal sold in this district. The exact quantity I can not tell, nor the price paid. Generally speaking, it is about double the price paid for Zwickau coal, which, according to the latest quotations, was selling at 125 marks per 10,000 kilos at the mines ($29.77 per 22,050 pounds or about 11 tons).

The advance in price of the German coal is probably to be attributed to three causes: The great depth at which the coal must now be mined; the marked advance in the price of English coal, and the recent strikes in the Bohemia and Saxony mines.

During the strike, many of the miners finding it impossible to earn a living, left for other places, where they secured employment, so that when work was resumed at the mines they were shorthanded, and now find it impossible to fill the orders that they have on hand.

So far as I can learn, there is no supply of coal held for higher prices. The mine owners and syndicates can get almost any price they see fit to ask for their coal, but they find it impossible to make delivery. Manufacturers turned to England, but found the price impossible, 415 marks, or $98.80, per 22,050 pounds, to which must be added the freight from Wallwitzhaven to Reichenbach, viz, 42 marks, or $10, making the total cost of 11 English tons of anthracite delivered at the railroad station of Reichenbach, $108.80.

The above conditions have given the American mine owners an opportunity which should not be neglected.

The only question for the American mine owners to consider, as there is no duty on imported coal, is the cost of transportation from the mines to the coal docks in Hamburg. I mention this city, as it is possible to take advantage of water freight via the Elbe to the very heart of Saxony.

The freight from Hamburg to Reichenbach for 11 English tons is 116 marks, or $27.62, and up the Elbe to Wallwitzhaven and from there by railroad to Reichenbach, it is 72 marks, or $17.14.

For this reason, it is most important that coal intended for Saxony should reach Hamburg during the early spring months, as soon as navigation opens on the Elbe, in order to take advantage of the water route.

The only statistics I can find regarding the amount of coal used in this district, or the district over which the Chamber of Commerce of Plauen has jurisdiction, are those for the year 1897.

In that year, this district used 622,935 metric tons of 2,205 pounds); of this amount, 543 tons were imported from Bohemia and 491 from other countries. Certainly a far greater amount will be used this year. To compete with English anthracite, the United States must deliver the same quality of coal at Hamburg for $5.67 a ton, including profit and all costs. The following figures are not based on as accurate information as I would like, but I believe that they are approximately correct:

The price of English coal at Wallwitzhaven is 415 marks or $98.80 for 11 English tons or $8.91 per ton.

I figure the cost of handling at 63 cents per ton; freight from Hamburg to Wallwitzhaven per Elbe, 81 cents per ton; and profit of the German agent at $1.80 per ton, making a total cost of $3.24 per ton, and leaving $5.67 to pay for all profit and expenses to Hamburg for every ton of American anthracite.

There are large deposits of anthracite coal in Rhenish Prussia; the quality is not as good as the English and the heavy cost of railroad transportation makes it more expensive, so that very little comes to this district.

The present prices for Saxon and Bohemian coal, as quoted by my coal merchant per 11-ton lots, are: Gas pitch coal, No. 1, 252 marks ($59.52); washed cubical coal, No. 1, 244 marks ($58.09); washed cubical coal, No. 2, 240 marks ($56.14); pitch nuts, 210 marks ($50); open burning coal, No. 1, 240 marks ($56.14); Bohemian brown coal, 200 marks ($47.61).

The above prices are for 10,000 kilos, or 22,046 pounds, or about 11 English tons.

There are no mines in the Plauen district; all the coal used here comes from Zwickau and Oelsnitz mines, with the exception of a small amount from Bohemia and England.

The cost of mining at Zwickau and Oelsnitz is increasing every year on account of the great depth, and I am informed that experts say the mines can not last more than two hundred years at the present rate.

As the manufacturing interests of Germany are increasing every year, it is certainly fair to suppose that the demand for coal will continue to advance, and also that it will be harder from year to year to satisfy it from the home mines.

THOS. WILLING PETERS,
Consul.

PLAUEN, *June 19, 1900.*

SOLINGEN.

This last winter will be sorrowfully remembered by the German industrial community, on account of the failure to obtain raw materials and coal. Especially the iron industry suffered. In most of the factories part of the force had to be laid off for days, and sometimes for weeks. The strikes in the coal mines of North Bohemia, Moravia, and some adjacent German districts also closed many factories.

Nine-tenths of the coal entering Solingen goes to the factories, and the remainder is distributed among private consumers, 200 or 300 pounds being the most a family can get at a time.

Chambers of commerce in different parts of Germany have investigated the matter and many of them say that the high prices are entirely out of proportion to the want, being due to the greed of the coal dealers. It is proposed to limit the export of coal from Germany, each mine being given a permit in proportion to its capacity.

EDMOND Z. BRODOWSKI, *Consul.*

SOLINGEN, *March 26, 1900.*

SUPPLEMENTAL.

I have inquired of all the exporters in my consular district (who are also the largest manufacturers), of five large coal dealers, and of the chamber of commerce, and the following is the result:

The Ruhr coal mine district, embracing a territory of not less than 100 American miles, produces enough coal to supply, under ordinary circumstances, all the factories in the consular districts of Barmen, Cologne, Aix la Chapelle, Düsseldorf, and Solingen, and retains besides a pretty large surplus for export and also for shipment to other parts of Germany.

The temporary scarcity of coal here is due to previous contracts made for delivery of coal to other parts of Germany, the coal mine syndicate not anticipating that the production in this district would be larger than in former years, while in fact, through the revival of business relations with Cuba and Manila (which had been abandoned for many years), the production has been increased fully a fifth.

During the first panic, some few firms ordered quite a large amount of English coal, but on account of heavy freight rates the price was a good deal higher than for the home product. Therefore the import of these English coals proved a failure.

No American coal has ever been imported into this coal district, and all those I have consulted agree unanimously that on account of the heavy freight rates, no market for our coal could be established here.

EDMOND Z. BRODOWSKI, *Consul.*

SOLINGEN, *April 10, 1900.*

STETTIN.

There is not so much a scarcity of coal in Europe as an unprecedented demand, which could easily be supplied if modern mining machinery and facilities now in use in the United States were adopted on this continent. The demand, which is greatly in excess of the available supply, is, in my opinion, caused by the prosperous state of industries in Europe. Germany alone consumed, in 1899, 6,000,000 tons of coal and turf fuel in excess of the total consumption for the year 1898.

A conservative estimate of the amount of British and German coals used in this consular district places it at 995,000 tons per year. Coals for manufacturing purposes are in greatest demand. There is no recognized demand for any special quality, as the cheapest coal usually has the readiest sale. The present sources of supply are Great Britain, upper Silesia, and, to a small extent, lower Silesia.

During the year 1899, Great Britain exported to Stettin 408,522 tons, which was a decrease over 1898 of 28,211 tons, this being due to high freight rates and advance in price. The present rate from Newcastle to Stettin on coal is 5s. 6d. ($1.34) per ton, while two years ago it was 3s. 6d. (99 cents) per ton; rate on anthracite from Wales is 6s. 9d. ($1.64).

American coal is unknown at this port, except to steamers plying between here and the States. The high freight rate of about 16s. 6d. ($4.01) from the States to this port is the principal impediment to the establishment of a market here. Colliers having their own line of vessels can, in my opinion, find a profitable European outlet.

James Stevenson, A. G., Königsthor 13, Stettin, imports annually 225,000 tons of coal and anthracite from Great Britain.

The following retail prices per ton prevail here at present: Nut anthracite, 38 marks ($9.05); pea anthracite, 35 marks ($8.33); bituminous nut coal, 26 marks ($6.18); bunker coals, English, small, 20 marks ($4.76); bunker coals, Silesian, small, 20 marks ($4.76); bunker coals, large, 24 marks ($5.71); factory coals, small, 20 marks ($4.76); factory coals, large, 23 marks ($5.47).

Eisenwerk Kraft, Kratzwick bei Stettin, consumes 400 tons of coal daily, mostly English Correspondence with either of the firms mentioned can be conducted in English. I will gladly answer any special inquiries.

JOHN E. KEHL, *Consul.*

STETTIN, *April 3, 1900.*

STUTTGART.

After unsuccessful attempts to obtain the desired information, I applied to the chief director of the royal railways of Wurttemberg, and have received the following reply:

> English and Belgian coal brought into Wurttemberg is transported mostly by water to Mannheim, where all coal, including that from the Ruhr district, is transferred to the different railroads. No distinction is made as to the origin of the coal, and it is therefore impossible for this bureau to give the quantities of foreign coal brought into Wurttemberg.

So far, I have been able to ascertain that there is no American coal in use here, but I see no reason why there should not be a good market, for there is no prejudice against it, and, in my opinion, the anthracite coal I have been accustomed to use in America for domestic consumption is superior to the best coal I can obtain here, and would be gladly received by consumers.

There are no coal mines in this district.

EDWARD H. OZMUN, *Consul.*

STUTTGART, *April 24, 1900.*

WEIMAR.

The coal most in favor in the Weimar consular district for household use, for bakers, and in establishments where it is not used for furnishing motive power is Bohemian brown coal. The present price is $18 per load of 10 tons at the mines; freight to Weimar is $21 on the same quantity, making the wholesale price in this city $39 per 10 tons.

Next in demand come "briquettes," made from brown coal mined near the town of Weissenfels, 35 miles distant from this city, the price being $38 per 10 tons; freight to Weimar, $6; total cost here, $44.

A third fuel, with much less heating power, is pressed turf. This is pressed into oblong blocks of 2 pounds each. The cost per 10 tons is $34; freight to Weimar, $6; total, $40.

Saxon and Westphalian stone coal is consumed in small quantities, this costing at Weimar $59 per 10 tons. Anthracite coal is used in heating stoves, that coming from Saxony and Westphalia costing $95 per 10 tons at the mines; freight to Weimar, $24; total, $119. English anthracite is imported and costs $91 per 10 tons at the port of Walwitzhaven, on the Elbe; freight to Weimar, $11; total, $102.

Coke, either from the local gas works or from Westphalia, costs $91 per 10 tons.

American coal is not consumed at all in this consular district, as far as can be ascertained. American anthracite coal would find a ready market here, could it be sold at the same price as the German or English.

There is no duty on coal imported into Germany.

The freight rates from the two great German seaports, Hamburg and Bremen, to Weimar, are $24.50 and $22.85, respectively.

The small import of foreign coal is attributed solely to the existing high ocean freights.

During the past winter there was a great demand for coal throughout Germany, and this demand still continues, owing to the great manufacturing activity; strikes, too, played an important rôle in the inability of coal merchants to fill orders. So great at times was the scarcity that wood had to be resorted to and orders left many weeks unfilled. The strikes in the coal regions whereby the German market was affected are now practically over.

THOS. EWING MOORE, *Consul.*

WEIMAR, *April 25, 1900.*

GIBRALTAR.

There is no demand in this district for imported coal, except for the purpose of bunkering steamers. No manufactories exist here, and the only consumers on shore are the gas company (which imports for its own use) and the electric lighting company. The sanitary commissioners also import a small quantity annually.

The total annual consumption of coal is about 300,000 tons, exclusive of what is supplied by the British Government to its ships of war.

The coals are from different mines in South Wales, Welsh qualities being almost absolutely needed. A small quantity of north country is occasionally imported for the consumption of local steamers and cooking ranges.

The coal is generally shipped to this port from the British ports of Cardiff and Newport.

No American coal is used here. It is pretended that Welsh coal is preferred to the American in consequence of its greater strength and steaming power, with less consumption.

The rates of freight across the Atlantic would in all likelihood militate against our coal competing with the British in a place like Gibraltar, which is so close to England.

Gibraltar is a British colony, and preference is given to the products of the mother country. Steamers also always demand British coal if obtainable.

No tariff duties or other restrictions are imposed upon the importation of American coal here.

The present selling rate for coal is 32s. sterling ($7.79) per ton f. o. b. for Welsh, and 30s. ($7.30) for north country; but if a contract is made for the whole year's supply, the price is reduced to 28s. ($6.81) per ton of 20 hundredweights alongside hulks moored in this bay, without trimming, which is 6d. (12 cents) per ton extra. Lighterage costs 3s. (73 cents) extra per ton.

Considerable quantities of coal are always kept in stock afloat in hulks moored in the bay.

HORATIO J. SPRAGUE, *Consul.*

GIBRALTAR, *April 5, 1900.*

SUPPLEMENTAL.

The private sales of coal during the month of May, 1900, were 23,824 tons; in 1899, 23,548 tons.

The present current price is 35s. sterling ($8.50) per ton for admiralty Welsh and 33s. ($8.01) for contract, delivered alongside hulk.

Up to the present, no description of American coal has been imported for sale at Gibraltar, nor does there appear to be any probability of any demand for it, as the local coal business is under the control of agents in England.

HORATIO J. SPRAGUE, *Consul.*

GIBRALTAR, *June 9, 1900.*

GREECE.

Greece produces no coal, and is therefore obliged to import all it uses. The importation of coal into this consular district during the year 1899 amounted to 285,000 tons of 2,240 pounds each, of which about one-fifth was used for manufacturing purposes. Nearly all of this coal came from Great Britain, principally from Cardiff and Newcastle-on-Tyne, in proportions of nine to one, respectively. A small quantity was imported from Black Sea ports in Turkey in Asia. Of the quantity named, 220,000 tons were received at Piræus, 60,000 at Syra, and 5,000 at Volo.

In 1897, three cargoes of American coal were imported from the United States; but the coal was of an inferior quality and contrasted so poorly with the Welsh coal that the Greek importers had difficulty in selling it here and have ordered no more. The American exporter who ships inferior articles or produce to foreign ports commits almost a crime, for he not only injures his own trade, but also the whole commerce of his country, and such transactions can not be too strongly condemned. They are great handicaps to the labors of the United States consular service.

The consumption of coal increases in this district at the rate of about 20,000 tons annually. The local prices are at present 68 drachmas (about $8, the present rate of exchange being 8.50 drachmas to $1) for Cardiff, and 65 drachmas for Newcastle coal, per ton of 2,240 pounds.

The freight rates on coal from Great Britain are from 8s. 6d. to 11s. ($2.06 to $2.67) per ton.

The quay dues are 50 centimes (9.6 cents) gold per ton of the vessel's tonnage, or 500 francs ($96.50) per 1,000 tons.

The sanitary office fees are 2 leptas ($0.0022) per ton of the ship's tonnage, and the pilotage is £4 ($19.46) per vessel. Unloading charges are 9d. (18 cents) per ton, and the agency fees £5 ($24.30). There is no tariff, but consumers pay a city tax of 30 leptas ($0.033) per ton.

DANIEL E. McGINLEY, *Consul.*

ATHENS, *June 18, 1900.*

PATRAS.

There has been during the past few years an increased demand for coal in this district, all, however, coming from Great Britain. Cardiff is the principal kind in use. The consumption averages about 25,000 tons; it is used by steamers plying in and about this port; by foreign vessels, railroads, and industrial establishments. The price paid ranges between 30 and 44 francs ($5.79 to $8.49) per ton according to the quality.

No coal mines exist in this district.

There is no American coal used in this vicinity; but there is no reason why it should not find a market here, if American exporters can make a profit at the prices current, already mentioned.

GEO. L. DARTE, *Consul.*

PATRAS, *April 18, 1900.*

ITALY.

CASTELLAMARE DI STABIA.

The demand for imported coal in this consular district is constant. The annual consumption of coal is, in round numbers, 144,000 tons. The kind used is Welsh. The price, stated in United States currency, is $7.50 per ton. No American coal is used here, and there are no coal mines. It should be noted that the price above given is the normal one. At present the price is about $10 a ton. There is no tariff on coal.

JOSEPH E. HAYDEN, *Consul.*

CASTELLAMARE, *May 17, 1900.*

CATANIA.

The import of coal at this port during the year 1899 was 80,000 tons (of 2,240 pounds), which is about the average annual consumption. It was supplied by the British ports of Newcastle, Cardiff, and Swansea, as follows:

	Tons.
Newcastle	24,000
Cardiff	35,000
Swansea (anthracite)	3,000
Patent fuel (briquettes), Swansea and Cardiff	18,000

The prices ranged during the year c. i. f. Catania, ship bunkers, for Newcastle and patent fuel, 25s. to 32s. 6d. ($6.07 to $7.90), and Cardiff, 26s. to 36s. 9d. ($6.32 to $8.92), the last quotations now being current. No American coal has been imported at this port, but several Catania ships have taken it in Northern Italian ports, and the owners assure me that it proved highly satisfactory and they expect to continue its use.

There is no import duty on coal. A governmental statistical tax of 10 centesimi (nearly 2 cents) per ton is levied; also 1 per cent of the cost of freight is collected for the chamber of commerce, the freight being about 10s. 6d. ($2.50).

The city of Catania levies an octroi tax of 5 lire (90 cents) per ton on all coal consumed in the city.

There is no coal mined in Sicily.

The principal dealers are: A. W. Elford & Co., Robert O. Franck, Fratelli Bonanno.

ALEXANDER HEINGARTNER,
Consul.

CATANIA, *April 14, 1900.*

FLORENCE.

The yearly consumption of coal by the Adriatic Railway Company amounts to over 425,000 tons, composed of bituminous coal in the form of bricks and anthracite in pieces, obtained from Wales, England, and from the United States.

No positive information can be secured as to its cost, owing to the fluctuations of the market, both in England and in America, as well as of freight charges, but within the last fifteen years it has varied from 23.55 lire ($4.70) to 31.13 lire ($6.20).

The coals used in Florence by the gas company are the New Pelton, Mickley, Boldon, and Thornley, from Newcastle, England, the average amount consumed yearly being 22,000 tons. The purchases of these coals are made directly through the Lyonnaise Gas Company, of France.

The freight from Leghorn to Florence, including the landing from steamer, loading in cars, transportation, loading on carts, and delivery, is 8.50 lire ($1.70) per ton.

The freight from Newcastle to Leghorn in 1899 was 9s. ($2.19); in 1900, 11s. 6d. ($2.80), and at present, 12s. 6d. ($3.04), per ton (2,240 pounds).

The Westmoreland Coal Company, of Philadelphia, Pa., sent a cargo in 1895 to the gas company here. The coal produced a very luminous gas, much better than that derived from the best English coals, and about equal in quantity per ton. Its production of coke was, however, inferior to the extent of 2 per cent as compared with that derived from English coal; it had not the same color and was reduced to small pieces, practically unmarketable, because here the coke must be of large-sized pieces. The gas produced by the Westmoreland coal is defective only on account of its rapid condensation, which makes its manufacture unprofitable. That may be explained by the oil with which the coal is impregnated. During the manufacture of gas 15 per cent is lost, while the loss on English coal under the same process is but 7 per cent.

American coal for illumination is too dear at present prices. For heating purposes, it is superior to Cardiff coal.

I feel sure that the United States could compete very successfully with England in supplying the Italian market with coal, if vessels could secure a return cargo of some sort to render the voyage possible to the charter party at reduced rate of freight.

EDWARD C. CRAMER, *Consul.*

FLORENCE, *April 13, 1900.*

GENOA.

The total quantity of coal imported by sea into Genoa during the year 1899 is estimated at 2,356,000 tons, of which about 500,000 were for Liguria (this district), 800,000 tons for bunkers, and the balance for the interior. About 200,000 tons were also imported from Germany.

I am told that American coal is not considered as satisfactory as the English product, more particularly on account of the quantity of minute particles and dust it contains.

Bituminous qualities could be introduced for industrial purposes, but not for heating and cooking.

The qualities of American coal preferred by the trade are Eureka, Pocahontas, New River, Thomas, and Elk Garden, costing 27s. to 28s. ($6.56-$6.80) per ton.

The importation of coal from the United States in 1899 is estimated at 18,000 tons, and thus far this year at 25,000 tons. The qualities might take the place of coals heretofore used, provided the prices were reduced much lower than for the English product. Consumers generally prefer the English article, even at a higher rate, partially for reasons already given, and also because they know exactly what to expect when they negotiate with representatives of English mines for cargoes of coal.

Drawbacks to the introduction of American coal lie in its size, its crumbling character, and its cost. There should be at least 70 per cent in large lumps or pieces for steam coal, but the cargoes brought here do not make nearly such an average, while the maximum of minute English coal will not exceed 20 per cent in a cargo.

Consumers also say that American coal is too bituminous.

There is a difference of from 6s. to 7s. ($1.45-$1.70) per ton in freight rates from England and the United States. The average rate from Cardiff is 11s. ($2.67) per ton, while, say, from Baltimore the rate is 17s. ($4.13) per ton. Of course demand may vary these figures occasionally.

Our coal should be screened before shipment, and, on account of its friable nature, the work at the mines should be more carefully done, following the methods practiced in England. The minute coal costs about 6s. ($1.45) less than ordinary lump coal. This class is molded into coal blocks or bricks in England instead of being sent abroad with ordinary cargo. Again, as before stated, as the maximum of minute English coal will not exceed 20 per cent, and as consumers are therefore accustomed to and prefer large lumps or pieces of coal, it seems clear that if Americans want to introduce their coal more extensively, they must conform to the requirements of the market. These suggestions refer particularly to coal for industrial, heating, and household purposes. Less attention is paid to the coal demanded for bunkers, Another strong reason why importers trade with England rather than with the United States is that England gives three months' credit, while the United States insists on a bank credit in its favor before the the coal is shipped from the mines.

The following suggestion from a very able business man in this city is indorsed by several gentlemen with whom I have spoken on the subject: If Americans wish to thoroughly introduce their coal in this market, they should appoint active agents here, in whom they have confidence, or, better yet, establish branch depots, with members of their own firms to attend to the business. All the large English collieries are represented in Genoa, and if Americans wish to transact an extensive trade in coal at this port, they should be present to push the trade personally or have some reliable parties to do it for them.

James Fletcher, *Consul.*

Genoa, *April 30, 1900.*

LEGHORN.

The annual importations of coal at this port are more than 300,000 tons. During the year 1898, 319,314 tons and in 1899, 323,075 tons were received here. Of these amounts 93 per cent in 1898 and fully 99 per cent in 1899 was of British origin. Approximately, 90 per cent of this coal is bituminous and 10 per cent anthracite. Of the total amount imported, 40 per cent is Welsh, 40 per cent from the Tyne, and 20 per cent is the Scotch coal from the Clyde and Forth. The Tyne coal is largely used by the gas plants; the Cardiff and Scotch as steam coal and for the manufacture of briquettes, the former commanding a much higher price.

Prices for the year 1899, up to November last, ranged as follows, f. o. b. steamer at shipping point: Scotch coal, 9s. 9d. to 10s. 6d. ($2.37 to $2.55); Tyne coal, 11s. to 12s. ($2.68 to $2.92); Welsh coal, 13s. 6d. to 14s. ($3.28 to $3.41).

Commencing in November, however, prices have until recently steadily advanced, and at the present time Scotch coal is selling at 12s. ($2.92), Tyne 14s. ($3.41), and the Welsh at from 20s. to 25s. ($4.87 to $6.08) per ton f. o. b.

Freight rates for 1899 averaged as follows: From Tyne, 7s. 9d. ($1.89) to 11s. ($2.68); Wales, 7s. 9d. ($1.89) to 11s. ($2.68); Scotland, 8s. 1½d. ($1.98) to 10s. 1½d. ($2.46).

Under ordinary conditions, these rates are the average charged by the steamship lines from the points named to this port.

During 1899, some 850 tons of American coal were shipped here by the Perkins Coal Company, of New York, mined, I believe, in the Youghiogheny, Pennsylvania, district. This coal was sold to the Government for use in the Italian navy, and the experiments made with it in comparison with the Cardiff coal generally used were eminently satisfactory.

The great difficulty in the way of the successful introduction of American coal in this section appears to be in the decided lack of transportation facilities and the high rates of freight exacted by the steamship lines running from the United States to Mediterranean ports. The Anchor and Prince lines are the only two having regular and frequent sailings between Leghorn and New York. As a rule, I believe that the steamers of these lines have large cargoes coming this way from New York, and are unable to accept coal at a rate which would be profitable to the exporter. The superior quality of the Cardiff coal has undoubtedly created a large demand for it in this section, but I believe that many of our mines produce a grade equally good for steam purposes, and, with reasonable freight rates and regular transportation facilities, could successfully compete with it.

The following are the largest coal importers here: Henderson & Co., Via Borra No. 2; Felice Menicanti, Via del l'Angelo No. 6; G. B. Stears, Via del Gazometro, gas works; Carlo Ruchat & Co., Borgo Torretta, manufacturer of briquettes.

Italy produces no coal and admits it free of duty.

JAS. A. SMITH, *Consul.*

LEGHORN, *April 4, 1900.*

MESSINA.

During the recent period of high prices, several importers of Messina tried to secure cargoes of Pocahontas and other coals, but could not be supplied, owing to the heavy demands for the output of the mines. I have no doubt that when freights fall to their normal condition, American coal can compete here with the production of other countries. One firm here (Pierce & Becker, owning the Creole line, trading between Italy and New Orleans) has for two years ordered all of its ships to Norfolk, where every available space is filled with Pocahontas, a large quantity being carried on deck; the aim being to take, if possible, sufficient for the round voyage. During 1899, there were imported into Messina coals as follows:

	Tons.
Great Britain	86,051
Austria	460

The qualities principally used here are Newport and North Country. The price now asked is 42 Italian lire ($7.63) per ton, trimmed into bunkers. The price that ruled previous to this great advance ranged from 22 to 25 Italian lire ($4 to $4.55). Freights from the British mining ports were then from 7s. to 9s. ($1.70 to $2.19), whereas now 16s. ($3.89) are asked, and 20s. ($4.87) have been paid.

The rate of freight from Newport News and Norfolk now quoted is 18s. ($4.38).

During the last few years, I have made it a point to inquire of the numerous captains of British ships trading here as to the burning and steam-producing qualities of American coals, and without exception they have declared that they gave equally as good results as the best Welsh. I have yet to hear the first complaint. One point on which they lay great stress is that they get full weight, which in this country is the exception rather than the rule.

This is a great bunkering port, and I have no doubt that, all things being equal, our coals could find a market. The great obstacle seems to be the freight. I have suggested to the owners of steamships here, that they make the experiment with a couple of their boats, and bring full cargoes of coals from Newport News or Norfolk when the cotton season closes.

Owners of American steamers would, I feel sure, find it profitable to charter at low rates for full cargoes to Mediterranean ports, for they would be certain to get a good paying fruit or sulphur charter back.

During the prevalence of the high rates, I received several letters from American coal dealers and immediately put them in the hands of brokers here, who state that there are prospects of favorable results.

In converting the Italian lira in this report into dollars, the calculation has been made at 5.50 lire to the dollar, the exchange ruling to-day.

CHAS. M. CAUGHY, *Consul.*

MESSINA, *April 7, 1900.*

MILAN.

The coal question is the subject of discussion in Italy, as it is all over Europe, and it is evident that the attention of manufacturers and others is turned toward the United States in this emergency, and that there is an opening for American coal under certain conditions, which no doubt can be met. Some small quantities of American coal have been tried in the past, but it is said it did not give satisfaction. That tried by the southern railroad companies, some sample loads, resulted in a loss of 50 per cent, I am told, which was reduced to dust and was used to make tiles.

There are many countries dependent upon England for their coal supply, and Italy, not being a coal-producing country, is one of the greatest purchasers, only France being ahead, and Germany about her equal. The coal commonly used in Italy, and naturally in Lombardy, which is the center of manufactures and the greatest coal-consuming district of the Kingdom, is Cardiff, with New Castle second, in about the proportion of 1 to 4. The amount of coal consumed in Lombardy varies from 700,000 to 1,000,000 tons yearly. In January, Cardiff coal was sold at Genoa f. o. b. at 50 francs ($9.65) per ton. Now the price is said to have dropped to 43 francs ($8.39) or 45 francs ($8.78) per ton, although at the mines it shows no signs of failing. For the moment, this favorable aspect is due to the fact that large stocks of coal were purchased during the past month in the fear of an increase in price. It is said that in the Genoa storehouses there is coal sufficient to last all Italy for three months. I am also informed that the present price of American coal f. o. b. Genoa is 43 francs ($8.39) per ton. The freight on coal—petite vitesse (slow freight)—is 6 centesimi ($0.0116) per quintal per kilometer (0.62137 mile). The port for Milan, and in fact for the manufacturing towns of Lombardy, would be Genoa, and the distance from Genoa to Milan is 150 kilometers (94.44 miles). There is no duty upon coal in Italy.

The following table shows the amount, in tons, of coal imported into Italy for the past five years, and the countries whence imported:

Countries.	1895.	1896.	1897.	1898.	1899.
Austria-Hungary	76,080	68,532	84,069	114,547	130,299
Belgium	15,207	22,425	13,896	23,363	18,963
France	83,348	19,199	20,745	30,663	11,000
Germany	25,384	24,452	28,612	89,203	38,421
Great Britain	4,149,545	3,938,684	4,097,944	4,146,662	4,652,831
Other countries	5,223	7,926	14,337	22,086	8,042
Total	4,304,787	4,081,218	4,259,643	4,426,524	4,859,556

The demands of the English Government for immediate and future needs in the Transvaal war have caused an evident decrease in disposable stocks and a considerable rise in prices, which has seriously threatened certain industries and augmented the expenses of others.

Although Italy has, as previously stated in this report, enough coal in the storehouses at Genoa to last for three months, still, should she not be able to obtain sufficient coal from the United States or elsewhere, her industries would be placed in a critical condition, especially if the supply from England should fail.

England, the United States, Germany, France, Austria (proper), and Belgium are the principal coal-producing countries of the world, in the order named, and the total production of the whole world for 1895 was estimated at (in thousands of tons) 574,948,000, for 1897 at 603,500,000, and for 1898 at 607,500,000. Should Russia and Hungary (proper) increase their production, their respective amounts would still not exceed 10,000,000 tons, consequently they can hardly be classed among the leading coal-producing countries of the world.

From 1891 to 1894, the average price of coal at the mines was nearly equal in England and Germany. In 1895, the price fell in England to $1.45 per ton and in 1897 to $1.40 per ton, while in Germany it rose to $1.63 and $1.65 per ton, respectively. In France, the price was 11.27 francs ($2.17) per ton in 1894, 11 francs ($2.12) in 1895, and

10.05 francs ($2.09) in 1897. In Belgium, the price per ton at the mines in 1894 was $1.78; in 1895, $1.91, and in 1897, $1.82.

It has been estimated that the English coal mines will not be exhausted for three centuries, but that for only fifty years can coal be mined at the prices of to-day, after which the price would be so great as to make it simply impossible to compete with the coal from America. But it scarcely seems reasonable that the United States will be obliged to wait fifty years before competing successfully with England in the coal markets of the world.

WM. JARVIS, *Consul.*

MILAN, *April 9, 1900.*

NAPLES.

In regard to an opening for the sale of American coal in Naples, I have to report that local dealers have lately received many offers (on account of the high prices and freights for coal from England) to introduce our coal here. They state that the great difficulty in importing it is that American coals are not screened as Welsh coals are, so that cargoes almost invariably contain 60 to 70 per cent of small; and as the value of small coal in Wales is from 7s. to 10s. ($1.70 to $2.43) less than large, they complain that an American cargo as a whole suffers a depreciation of no less than from 3s. to 4s. (73 to 97 cents) per ton. Another fact they mention is that the freights from the United States have lately been very high, 16s. and 17s. ($3.89 and $4.14) being demanded for carrying coal from the United States to ports of western Italy, and considering that even now the best Cardiff screened coal can be bought at about 29s. ($7.05), c. i. f., West Italy, it would seem that American coal can not successfully compete. However, when Welsh prices were about 35s. ($8.52), during January and February, some purchases of American coals, such as Elk Garden, Pocahontas, New River, Eureka etc., were made at about 27s. ($6.57), c. i. f., West Italy.

An Italian shipowner and coal merchant, Count Raggio, has made a sale of about 100,000 tons of Pocahontas coal, at 28s. 6d. ($6.93) c. i. f. Italian ports in the Adriatic Sea, for railway purposes, but as he owns patent-fuel works, he has undertaken to agglomerate in patent fuel, free of charge, all the small, which means a loss of at least 2s. 6d. (61 cents) per ton on an average of the value of a ton of American coal. His price is thus reduced to 26s. ($6.33), which leaves a very poor freight for his boats, considering that freights from England to the Adriatic have lately been 3s. (73 cents) dearer than rates for West Italy.

Italy produces little or no coal, except of a very poor quality from some small lignite mines. She buys from Great Britain about 5,000,000 tons per year for railway purposes, gas works, ship bunkerings, manufacturing, and steam purposes, and about 100,000 tons per year of anthracite for lime burning, patent gas, steam making, and house-heating purposes.

It is believed that our American dealers could do quite a large trade with Italy, if their coal ran larger and if they could arrange cheaper freights. It must not be forgotten, however, that the present prices of Welsh coals are altogether exceptional on account of the war in the Transvaal, as the average price for the last ten years can be rated at 20s. ($4.87), c. i. f., West Italy, and in some years the price has gone as low as 16s. and 17s. ($3.89 and $4.14), and Newport coals reached 14s. ($3.41), c. i. f.

A. HOMER BYINGTON, *Consul.*

NAPLES, *April 30, 1900.*

PALERMO.

The coal supply of Palermo and vicinity comes principally from Newcastle and Cardiff, England, and is known as first quality. The following table shows the quantity imported during the last three years:

From—	1897.	1898.	1899.
	Tons.	*Tons.*	*Tons.*
England	70,593	84,287	79,704
United States	151	....	....
Belgium	100	50	....
Austria	....	310	315
Total	70,844	84,647	80,019

The cost of the best qualities, free on board at Palermo, is 30s. ($7.30) per ton of 1,016 kilograms (2,240 pounds), while the price at which it is sold by dealers to consumers is 42 lire in paper ($7.56) per ton of 1,000 kilograms (2,204 pounds).

There is no duty imposed on pit coal.

If the United States can compete in quality and price with England, there is no reason why American coal should not find a market at Palermo.

CHURCH HOWE, *Consul.*

PALERMO, *April 28, 1900.*

VENICE.

Coal is the principal article imported into Venice and the surrounding region. The railways and manufactories of the district maintain a constant demand, and no collieries are found in the country. The importation during the calendar year 1899 amounted to 660,380 tons, of which 219,460 tons were reexported into the surrounding country.

The consumption of Venice was, accordingly, 440,920 tons. These figures probably do not account for all the coal used in the entire consular district during the year, as a considerable portion of that burned in the city and region of Verona would be included in the importation at Genoa.

The bulk of this coal comes from England, and consists of fossil coals for steam use. The price of the same is about $9 a ton, usually somewhat less, but during the recent scarcity it has been nearly a dollar more. A coal of inferior quality is brought from Austria, but not in large quantity. It commands $5.20 a ton.

American coal is almost unknown here. The railway company of the Adriatic recently made trial of a small shipment, and is said to have found it perfectly satisfactory. A manufacturer of coal bricks for railroad use (Raccio & Co.) has been able to use American coal on account of its friability. But this quality is a disadvantage in the eyes of most consumers, who greatly prefer the harder English article. The price demanded is the same as that asked for English coal, so that heretofore the outlook for American coal has not been bright. So long as an equality in price continues, the local consumers will every time choose the product they know best. It is not uninteresting to note in this connection that what American coal has reached this port has come through the hands of agents in Newcastle on Tyne. But dealers inform me that the offers recently made them from the United States give no advantage as to price over the American coal obtained through England. Accordingly, they have no object in importing the American article direct, as the recent scarcity no longer exists.

No obstacles exist in the way of tariffs or other restrictions. Communication is direct. The Austro-American Line plying from Trieste to the Gulf of Mexico stops at Venice, New York, and Newport News. There is also an English line, called the New York and Adriatic Line, that plies about once a month between Venice and New York. Besides these regular services, English tramp boats run not infrequently from here to American ports.

The leading dealers are: A. Dal Fiol & Co., 3675 Ponte Pasqualigo, San Felice; A. Medicus & Co., 1626 Campiello del Carro, San Marco; A. Millosevich, 685 Spadaria, San Marco; Pela & Stefanutti, 1304 Calle Valleressa, San Marco; G. Venuti, 5867 Borgoloco Santa Maria Formosa.

H. A. JOHNSON, *Consul.*

VENICE, *April 9, 1900.*

SUPPLEMENTAL.

The extracts following are from a letter written by Consul Johnson, under date of June 8, 1900, to a New York inquirer.[1]

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[1] To whom the original letter has been sent.

Local dealers obtain steam coal in England at 19s. or 20s. ($4.61 to $4.86) per ton. Gas coal costs them 16s. to 18s. ($3.88 to $4.13). Transportation to Venice costs 12s. ($3.91) a ton on an average in steamers of large capacity. The best Cardiff coal brings, on board in Venice, $8.28 per ton (46 lire). Other English coals bring from $6.84 to $7.74 per ton (38 to 43 lire). The facilities for unloading are very inadequate, as the work is done by hand from ship to lighter and from lighter to dock. The cost of unloading is $0.04 or $0.10 per ton, according as the coal is put on the dock or in freight cars.

MALTA.

I have received recently many letters from American coal dealers requesting information as to the coal trade at Malta. The conditions of the trade here may be said to be much the same as at all other ports that have always depended for their supply upon England. The port of Valletta, Malta, is one of the largest posts of call for vessels going to and from the Suez Canal in the Mediterranean, being halfway between Gibraltar and Port Said. According to the figures published by the Malta Chamber of Commerce in its last report, the importations of coal here during the year 1899 amounted to 430,529 tons, against 459,934 tons in the previous year. This difference was probably due to the coal strikes in England making the supply short. The quantities imported during the previous fifteen years were as follows:

	Tons.
1884 to 1888	2,539,572
1889 to 1893	2,236,480
1894 to 1898	1,958,580

This represents an annual average of—

	Tons.
For the first five years	537,914
For the second five years	447,296
For the third five years	391,716
For the three periods taken together	448,975

The coal represented by the foregoing figures was, with some very trifling exceptions, British, viz: Welsh steam coal for supply to the British war ships and steamships of all nationalities, and North Country coal for industrial and household purposes, the latter description representing only a small part of the totals given. The British Admiralty has its own depots here, and carries large stocks for supply to the numerous war ships serving on this station. A rough estimate of the annual quantity of coal imported in this connection would be 150,000 to 200,000 tons. The purchasing of supplies is done by the British Admiralty at London. In times of exigency, small quantities have been bought locally. The coal imported by the merchants is almost exclusively for the supply of steamships and foreign war ships. Steamship owners, whether British or of other nationalities, have for a considerable time provided for bunker supplies for their vessels at the different coaling stations spread all over the world, by yearly contracts, which have been taken up by London firms and worked by them through local agents or merchants located at such stations. Such agents or merchants are bound to take their supplies from the former, either to the extent of a fixed quantity for the year or in proportion to the deliveries effected by them. Malta agents and merchants work under such an arrangement, the price of their supplies being fixed for the year at the time contracts are made. The general contract prices for this year vary from 23s. 6d. ($5.71) to 24s. 6d. ($5.95) for the best Welsh steam coal, delivered free into bunkers without trimming. There is a small charge for the latter service, but I understand that in the case of certain steamship lines taking large supplies at this port, a much lower price is contracted for. It will be seen that under such conditions, local agents and merchants are not free to buy their supplies except through the London firms controlling the whole business, nor would the price at which a cargo of American steam coal could be laid down here probably permit of its being taken, against the large stocks of Welsh steam coal under contract. Given a like price at port of shipment, the higher freights that would necessarily have to be incurred for transportation and the longer passage involved would greatly handicap the American product.

I do not find that American coal is well known here, but were the obstacles standing in the way of its importation removed, a large quantity of steam and other qualities would find a permanent market at Malta. There are no coal mines here, and imported coal is free from customs duties and other restrictions. The present average price per ton for steaming coal supplied to steamships arriving here without a contract is 34s. ($8.26), but very few vessels arrive here for contracts. I believe, from the inquiries I have made, that if American coal is to be used at Malta, arrangements must first be made at London. For instance, before the end of the present year, at which time contracts usually expire between shipowners and coal firms in London, our dealers should bring the matter of American coal to the attention of British and other shipowners and endeavor to have contracts call for Welsh "or American" steam coal. If anything is to be done, it must at present be done at London. I have talked with various masters of ships calling at this port on their way to the United States, and all are unanimous in the statement that they regard American coal as more reliable than any other, and that if they could secure it at this port, they would prefer it. Other masters know very little about our coal from actual experience.

The cost of steam coal to-day at Cardiff is 20s. ($4.86) per ton, f. o. b. This week the steamship *Red Jacket* arrived here from New port News, Va., for Alexandria. She brought about 3,500 tons of steam coal, which paid a freight of 17s. ($4.13). The steamship *Green Jacket* is expected here hourly for the same port, with a like quantity. Mr. S. Micallef Eynaud, of this city, was the purchaser. In conversation with me relative to the condition of the coal trade and the possibilities for American coal on this side of the Atlantic, Mr. Eynaud said:

> I should be pleased to receive quotations next autumn on American coal. I desire to have more than one field of supply to draw from. High wages are paid miners in England to-day, and I believe that when present conditions change the miners will demand a continuance of these wages, and strikes will be the result. I believe that the whole matter of contracts between shipowners, coal firms, and agents will be fought over during the coming autumn, at which time buyers look the field over previous to signing contracts for the coming year. Contracts made with shipowners at London usually specify that Welsh coal is to be supplied. If an option could be given to use American coal when warranted by the market, it would ease us up greatly.

Mr. Eynaud believes that this point will be discussed in the coming conferences, and that it behooves American dealers to interest themselves on this line. Mr. Eynaud is sending the two cargoes above mentioned to Alexandria to supply depletions in his stock there, due to his not being able to get coal contracted for from England in time. Mr. Eynaud does not order American coal for Malta, for the reason that his present stock is ample. His great difficulty now is in getting transportation.

In the matter of gas coal, I would say that I believe that there is a good chance to supply this quality in the Mediterranean. A few days ago Mr. John W. Starkey, manager of the Malta and Mediterranean Gas Company, Limited, wrote me a letter asking as to the possibility of American gas coal being brought to Malta. Believing that a personal interview would be of more profit than correspondence, I paid him a visit, and found that he has been having hard work to get coal for his works. He desires information from American dealers as to the amount of gas that can be obtained from our coal per ton, cost of freight, etc. Recently, on account of the condition of the market, the price of gas has been advanced from 4s. 4d. ($1.05) per thousand to 4s. 7d. ($1.11) per thousand. The coal he has been using has come from Newcastle, England, and the average yield has been a little over 10,000 cubic feet per ton. The same steps would have to be taken in this case as with steam coal. The matter must be arranged at the head office at London. I would suggest that, in addition to corresponding with the latter, Mr. Starkey be informed as to the quality of our gas coal, etc.

The following London firms supply coal to Malta agents and merchants: E. T. Agius & Co., Burness & Co., Tozir & Co., William Cory & Son, Watts & Ward, Lambert Bros., Tagliaferro & Co., Hull, Blyth

& Co. Agents and merchants at Valletta are: S. Micallef Eynaud, Gollcher & Sons, T. C. Smith & Co., T. G. Micallef, A. Camilleri, S. Grech, Francesco Pace, C. Lowe, and Wright & Co. To sum up generally, I would say that if our dealers can make the proper arrangements with London firms and can offer low enough freight rates, there is a chance during the coming year to introduce American coal here, as the conditions in England, from present indications, are likely to continue for some time to come.

JOHN H. GROUT, *Consul.*

VALLETTA, *April 10, 1900.*

NETHERLANDS.

AMSTERDAM.

Messrs. K. H. Van Pelt state:

There is a decidedly greater demand for steam coal for industrial purposes all over Europe than heretofore, but this does not justify the sudden rise in price, and it is generally thought by the coal trade that the present price is somewhat artificial, and that after things have been settled in the Transvaal, unless followed by a general European war or such like grave catastrophe, or an extensive strike in the European collieries, there will be a falling off, prices going slowly downward or shading off until the normal level is again reached. There is still coal enough left in German and English collieries to supply European demands.

Just now, the price of a good quality of large Newcastle steam coal is 23 to 24s. ($5.52 to $5.76) per ton, 20 hundredweight, c. i. f Dutch port. The East coast steam coal is cheaper but of inferior quality, and the Cardiff coal being too dear for general steam purposes, is used only by our navy.

Westphalian coal is a few shillings per ton cheaper than Newcastle, although the contracts for 1900-1 are higher than those of last year.

I do not know American coal myself, but I am told that in quality it is inferior to English and Westphalian, too quick burning, leaving behind a dense black smoke and large flakes of soot. Another drawback is the freight from America, which will, I fear, prevent business because of the resulting high price at which the coal must be delivered here. The regular steamers trading between Dutch and American ports will not carry coal at a ballast rate of freight, because they have enough other freight, and outside steamers crossing the Atlantic are too large. Such large steamers have too great carrying capacity for the demands of the trade. The steamers in the English-Dutch coal trade measure from 600 to 1,000 tons.

From these particulars, you will see that American coal has not much chance to find its way into our markets, but the Spanish and Italian ports may offer better opportunities. I do not know the c. i. f. price of a cargo of American coal recently discharged at Genoa, but I do know that the steamer received 16s. ($3.84) per ton freight.

If American coal merchants will send you an analysis of a steam coal equal in quality to a good Newcastle coal, with c. i. f. price, Dutch port, by a regular steamer, and you will put these particulars into my hands, I shall be able to say whether business is practicable.

Messrs. Harrenstein & Mijnssen, of Amsterdam, write:

The greater part of the coal imported into the Netherlands comes from the mines in Westphalia (about 6,000 to 7,000 tons daily), and is used chiefly for steam purposes. Some 300,000 tons are used annually for house coal. Besides those quantities that come through the agency of the Rhenish Westphalian Coal Syndicate at Utrecht, imported by rail, Westphalian coal is shipped from Ruhrort, Duisburg, and Hochfeld, and is destined mainly for manufactories situated on the banks of our large water courses. Coal imported from Belgium, with the exception of rather small lots for manufactories in Tilburg, Helmond, and Rozendal, consists of anthracite nuts for household purposes. At Harlingen, Rotterdam, Amsterdam, and Flushing, considerable quantities of steam and gas coals are imported from the Tyne, Hull, Goole, and Glasgow. Cardiff coal is imported only in small quantities, chiefly for the admiralty, and Swansea anthracite is imported at Amsterdam and Rotterdam, and of late years, at Harlingen.

Coal prices are very firm at present. First-class Westphalian steam coal is sold at 16 to 17s. ($3.84 to $4.08) per ton, free at Amsterdam. West Hartley steam coal sells at 20s. ($4.80) per ton, c. i. f. Amsterdam. Gas coal has brought 22 to 23s. ($5.28 to $5.52). Swansea anthracite sells at 25s. 6d. ($6.12) c. i. f. Amsterdam. If local and foreign industries flourish as in late years, further increases in prices may be anticipated, but as soon as the demand slackens a severe decline in prices is sure to follow.

The Algemeen Handelsblad (general trade paper), of this city, of April 10, 1900, writes:

The question is being agitated in Germany, in order to supply lack of coal in that country, of doing away with the special rates for the exportation of coal which have prevailed during late years. These rates exist for the transportation of coal to France, Belgium, Switzerland, Italy, and the Netherlands; they will be revised at an early date. This is of great importance to the Netherlands, as the coal carried by rail is for the greater part transported at express train rates, contracted for every year. If the rates are canceled, the prices of coal at the ports of destination will rise.

We are informed that the board of managers of the coal syndicate at Essen and the coal-trade association at Utrecht succeeded in maintaining the existing express train rates for the whole year, from April 1, 1900, to March 31, 1901. Said association has contracted with the Prussian and Dutch railway companies for a minimum of 139 express trains every week. As many coal contracts have been made with the provision that the special rates would remain in force, the renewal of the contract above mentioned is a great satisfaction to dealers in Westphalian coal.

The director of the Preston Coal Company, Limited, of this city, states:

The consumption of coal here, as also in other countries, has increased; however, there is a heavy competition between English coal from the east coast and German coal from Westphalia, while Belgian coal is too dear. I think there is no chance for American coal to compete in this market. Contracts for German coal close this year at about 16s. ($3.89) per ton, Amsterdam and Rotterdam, whilst English coal commands prices up to 18s. 6d. ($4.50).

There is a rumor that the Westphalia syndicate, which is the largest supplier of coal to Holland, will produce about 3,000,000 tons of coal more this year, being about 10 per cent of the whole production, of which Holland, of course, gets its share.

As soon as prices rise again I will inform you, but I do not think that there is a chance for American coal in Holland at this moment. It is reported that American coal can compete only on those markets where the Cardiff coal is the principal kind required, and in consequence American coal is too dear.

The Government engineer of the Dutch coal mines has informed this office that the production of coal in the Netherlands is very small. There are only three coal mines—the Dominial, the mine Neuprick at Kerkrade, and a mine near Heerlen, in the province of Limburg. The output of the Dominial mine at Kerkrade during the year 1898 was 106,418.20 tons; that of the mine Neuprick, 43,980. The mine near Heerlen was in course of exploitation and yielded no product.

For household purposes, coke and peat are used. This peat—or turf, as it is called here—is, as Meldrum in his "Holland and the Hollanders" says, one of the three great products of Holland, the other two being butter and herring. The great peat beds are found in Groningen and Drenthe. Anthracite coal is gradually coming into use for heating purposes in houses.

In this country, water and electricity play little part as motive powers.

A list of steamship lines from American ports to Rotterdam is contained in Consular Reports for March, 1900 (No. 234; also in Advance Sheets No. 629) and of lines to this port, in Commercial Relations for 1899, Volume II.

In order to get some substantial statement from local authority, I submitted an extract from a United States newspaper to the manager of the Preston Coal Company, of Amsterdam. The extract estimated the cost of shipping coal to England at $1 per ton and the cost of a steel steamer of 7,000 tons at $300,000. Other charges were to amount to some $8,000. Mr. Preston says:

> The average freight on coal from Newcastle to Holland is 4s. (97 cents) per ton. I consider the estimate in regard to the cost of the steamer impossible. It is not the question what the cost price of a steamer is, but at what rate you can charter one. Coal freights are footed same as grain and lumber freights, and if the trade increases we will come to the point that these steamers will have to return in ballast to the United States, which, of course, means increase in the freight charges. A steamer of 3,500 tons costs for hire £875 to £900 ($4,258.18 to $4,379.80) per month; that is, £30 ($146) per day, running at a speed of 9 to 10 knots. Taking the distance from America to the continent at 3,282 miles, this divided by 9 knots makes fifteen days at £30 ($146) per day, or £450 ($2,189.92). Loading and discharging expenses are at an average 2s. ($0.48) per ton; fuel would amount to about 20 tons per day, or 300 tons, at $4 per ton—$1,200—making for 3,500 tons cargo £1,046 11s. 8d. ($5,069.92), or about 6s. ($1.46) per ton. The steamer runs the chance of having to return in ballast to America on account of not being able to get any return freight, which means fifteen days more hire of steamer and fuel and brings the freight up to 12s., or $2.92, per ton. American coal will find a good market in the Mediterranean ports, as the freight from Cardiff to those ports is very high. There may be found trade for American coal in every market where Cardiff coal sells, if the freight from Cardiff is the same as from America. At the same time, you must not forget that rates in hiring steamers are going up, which, of course, means higher sea freights. They have already risen from 15 to 20 per cent.

The present seems to be a propitious time to test the European market for our surplus coal, Europe's extremity, as an English journal has recently said, being America's opportunity. The crux of the matter would appear to be the question of freights.

The leading coal people and transportation companies should establish and maintain offices at proper points in Europe. A line of colliers should be put into service which, by the time that the present demand for coal (which all recognize as abnormal and due to a very exceptional situation) has slackened, should be permanently established in a regular trade. The cost of mining coal is constantly increasing on this side of the water, as the seams are at lower depths, whereas our coal deposits are on the surface.

This consulate has received numerous letters from American coal companies, and even from people who wish to dispose of coal properties in the United States. While these communications have received careful attention as a matter of course, it may be pertinent to suggest that that method of doing things is ineffective. An example of a better way is also at hand. A Baltimore firm, I am informed, had a man here last week, who surveyed the outlook personally. It is needless to say that this firm will be duly apprised of the precise basis on which business can be done here, which information is worth his expenses many times.

FRANK D. HILL, *Consul.*

AMSTERDAM, *April 10, 1900.*

Under date of April 23, Mr. Hill adds:

The agent of the Holland-America Line, of this city, informed me that the steamer *Cliveden*, now sailing from Newport News to Amsterdam, carries a cargo of 2,000 tons American coal, consigned to a French firm, who sold the same to the Stoomvaart Maatschappij Nederland (Netherlands Steamship Company), of this city, the freight being about $3 per ton.

ROTTERDAM.

The scarcity of coal in Europe this winter, and the consequent high prices, have naturally led to the question if a favorable opportunity had not arrived for owners of American coal mines to establish a market on this side of the Atlantic. I have tried to investigate this subject as far as this port is concerned, where the manufacturing and shipping interests, particularly the latter, annually consume coal in great quantities. It has, however, been difficult to obtain definite and satisfactory information, as nearly all the coal dealers in Rotterdam seem to be members of a combination or trust, which has a contract with the German coal-mine owners in Westphalia and the Rhine districts to handle certain quantities of the output of their mines. This combination practically controls the coal market here and dictates prices, and it seems to fear that if independent parties should undertake to import American coal, they might effect a cut in prices and consequently in the profits of the combine. Hence, the coal dealers have been willing to furnish me but very little information, and such facts as I have been able to gather as to prices, freight rates, etc., I have obtained from persons who, while not in the business, are still in position to be well informed on the subject.

Considerable quantities of English coal have heretofore been annually imported, but owing to the strikes among the miners in Wales and to the heavy consumption by the British Government on account of the war with the Transvaal, but little English coal has found its way into the Dutch market this winter.

The prices quoted to me by various parties differ somewhat, but I believe that a fair average price for the past several months has been:

Wholesale: German—Soft coal (Dutch, kachel kolen), $3.75 per ton; steam coal (here called "haard kolen," a bituminous coal, but quite hard), $4 to $4.50. English—Anthracite coal, $7 to $8.

Retail: Soft (kachel) coal, $5.10; steam (haard) coal, $6.75; anthracite coal, $8 to $8.90.

The price of coke has been, wholesale, $5, and retail, $5.75 per ton. It should be noted, however, that a Dutch ton is 2,220 pounds.

Whether or not it will pay American mine owners to attempt to work up a Dutch trade will depend on whether the present coal prices here are permanent and not spasmodic, and what freight rates can be obtained from ports in the United States to Europe.

Dealers here claim that the present prices will keep up only until the English strikes are settled and the Transvaal war ended. They claim that the scarcity of English coal has caused the German mine owners and the coal dealers here to take advantage of the situation and screw up prices, and that the latter will depreciate as soon as English coal is again thrown on the market. I doubt, however, if this assertion is wholly to be relied on, as it of course would be for the interest of the dealers here to have this idea prevail, in order to keep out American competition; and to prove the probable correctness of my opinion, I may state that a certain party in this city a day or two ago told me that he had placed an order with an American firm for 10,000 tons of anthracite coal. Immediately afterwards he seemed to regret having told me, as he feared that others might want to try the experiment and become his competitors. He particularly requested me not to mention his name in any report.

These may seem trifles to mention, but I thought it might interest the Department, and perhaps others, to learn the conditions under which consuls often labor.

On the other hand, the firm Gebroeders Pot (Pot Brothers), shipbuilders, at Bolnes, near Rotterdam, represented in this city by L.

Smit, has requested me to state that it would be glad to receive offers of coke from American firms, with quotations of prices.

It has been impossible to obtain any positive information in regard to ocean freight rates for coal, as shipowners and brokers as a rule decline to quote such. The Holland-America Steamship Line, however, informs me that one of its freight steamers is now en route from Newport News with a cargo of anthracite coal for Holland, for which the freight rate is 12s. 6d. ($3) per ton. The company will not quote any fixed rate here, but refers shippers to its agents in the United States.

The total import of coal for consumption in Holland during the year 1898 was 5,588,961 tons; for consumption in Rotterdam, 565,248 tons.

My personal impression is that it will pay American mine owners to look up the Rotterdam as well as the Dutch market generally, and either establish coal yards here themselves or make arrangements with reliable indeoendent agents or purchasers.

There is no import duty on coal in The Netherlands.

I submit herewith some names of coal dealers who, I am informed, might be willing to handle American coal in Rotterdam: W. Hoven & Zoon, Willemskade; J. & C. Harrison & Co., Wynestraat; T. H. Hoos, & Zoon, Lenvehaven; I. T. Hensen, Admiraliteitskade; J. C. H. Thummler & Co., Wynestraat.

S. LISTOE, *Consul.*

ROTTERDAM, *April 2, 1900.*

RUSSIA.

ST. PETERSBURG.

American coal is not known in this consular district. There is considerable coal mined in the south of Russia, but the veins are thin, the quality poor; it contains sulphur and can not be had in sufficient quantity to meet the demand. The freight charges prevent its use at any point north of Moscow and crude petroleum has almost supplanted its employment by manufacturers in that region, as well as on locomotives and steamboats on the Volga.

St. Petersburg receives its coal from England; the importation during the past year at this port amounted to 1,900,000 tons.

The leading coal dealers here are in the receipt of letters from exporters of American coal, which name a price f. o. b. at some port in the United States. Russian dealers buy only by the cargo, free of all cost, at Kronstadt, a suburb of this city. As there is no regular line of steamers between here and the United States, and they know nothing about American vessels or ship brokers, facilities in loading, time required to make the voyage, or rates of insurance, they decline to consider the proposition submitted, but if American dealers could quote a satisfactory rate for coal that will bear stacking from 12 to 15 feet, f. o. b. at Kronstadt, I am satisfied an enormous business can be done here.

The Russians are told by the English dealers that American coal is soft, 50 per cent small, dirty. Delivery must be made between May and October, as this port is closed by ice during the remainder of the year. Although the winters here are longer, they are not as severe or trying as in most of the Northern States.

The serious obstacle in the way of building up a market for American coal at St. Petersburg is the absence of return cargo. No American vessels visit this port. The large shipments of machinery, steel rail, armor plate, cotton, etc., that come here from the United States are carried in foreign bottoms which go to other countries of the north for return freight.

English coal was sold in this market during the summer months of 1898 at prices ranging between 14s and 16s. ($3.41 and $3.89) per ton; during 1899 at 18s. ($4.38), and during 1900 the price has been between 25s. and 27s. ($6.08 and $6.57), the sum being regulated by the price on the next coast of England.

W. R. HOLLOWAY,
Consul-General.

ST. PETERSBURG, *April 16, 1900.*

ODESSA.

American coal has not as yet appeared in the markets of south Russia, but numerous American firms are at present in correspondence with coal dealers and with consumers of that commodity at Odessa, in the desire of establishing a regular export trade to south Russia, for which enterprise the present condition of the coal market here would appear to be especially propitious.

It must, however, be kept in mind that although there is such scarcity of coal that is has been described as a "coal famine," yet the ruling prices of coal at Odessa (cost of insurance and freight) are: Cardiff coal, best quality, about 27s. 6d. ($6.69) per ton; second quality, about 25s. ($5.08) per ton; best Newcastle steam coal, about 25s. ($5.08) per ton, etc. Though decidedly above the average, these can not be exactly described as famine prices, and this, coupled with the circumstance that there is no regular exportation of voluminous commodities from Russia to the United States, so that vessels bringing coal here would have to ask for comparatively high rates, is bound to hamper the development of this trade.

Moreover, as soon as the balance between the output of coal in the so-called Donets basin and the demand for the requirements of the rapidly growing metallurgical industries of Russia adjusts itself so as to leave a margin of available coal, the price of the latter will fall below the average, and there may result a renewal of that condition of the coal market here, under which some time ago it became possible to export Russian coal to Turkey.

If the new coal mines opened in the Caucasus prove as rich as hoped, Russia may at no very distant date permanently supply parts of Turkey with coal, and the importation of foreign coal into Russia may fall off so as to become exceptional.

The sole cause of the present scarcity is the fact that the steadily developing output has not been able to keep pace with the quite unprecedented advance of industry. This advance, however, must find a limit as soon as the demands of the home market for its products are satisfied, and from that moment the coal output must gain on the demand. To venture to determine the time when this must happen would be mere speculation. In the meantime, American coal merchants should place before Odessa dealers quotations of the qualities of coal they can offer and of the prices at which they can deliver the coal here, cost of sea transport included.

If such circular offers were to be sent to this office, I would hasten to place them into the proper hands.

All the foreign coal so far used at Odessa seems to have come from Great Britain, other shipments having apparently at no time gone beyond the limits of experiments.

The customs duty on foreign coal is 6 rubles gold per pood of 36 pounds, or about $2.66 per ton, but, in view of the scarcity of coal here, permission has been granted to import, in 1900, 6,000,000 poods, or about 100,000 tons, for the household requirements of the local residents, on payment of only 1½ rubles per pood, or about 66 cents per ton; and some railway and steamship companies have obtained similar permissions, and other enterprises are petitioning for the same privilege. But as the American shippers will never be in a position to safely judge whether the receiver here has the right to import any coal at a reduced customs rate, they should only engage to deliver their coal here at certain rates inclusive of cost of sea transport (c. i. f.), and should leave it to the receivers at Odessa to pay the customs duty, etc., and to arrange all else required. No coal should be sent here under any circumstances as a venture on speculation (to order), as that would probably prove far too unsafe.

I add the names of some of the principal importers or consumers of foreign coal at Odessa: William Jacobs Owen & Co., Smalls Eeles & Co., Russian Steam Navigation and Trading Company, Russian Volunteer Fleet, Azone Steam Navigation Company, Black Sea and Danube Company, Russia Company of Steam Navigation and Transports, Odessa Gas Works Company.

H. F. RUNGE,
Vice and Acting Consul.

ODESSA, *April 17, 1900.*

RIGA.

During the year 1898, the import of coal into Riga by sea amounted to—

	Tons.
From Great Britain	302,038
From Germany	593
From Holland, i. e., from Westphalia, via the Rhine	12,100

The official figures for 1899 are not yet to be had, but it might not be too rash to conclude that the import has exceeded the above-mentioned figures by 25 per cent, and that this year's import will show an increase of 50 per cent.

As the Russian coal district is so far from these northwestern provinces that the freight by rail would render the product still more expensive than English coals, no Russian coals are consumed here.

No official figures, I am sorry to say, are at my disposal as regards the total consumption of coal in this consular district.

The kinds especially in demand here are: Newcastle, offered c. i. f. Riga at about 26s. ($6.31); best Scotch, offered c. i. f. Riga at 24s. ($5.83).

American coals are, up to date, absolutely unknown here, and will hardly find purchasers until the public has been enabled by means of an analysis to compare the product with the European article; but in case the quality proves satisfactory and the prices are moderate, I am sure that a good market could be found here.

The coals ought to be sent direct from America to Russia without transshipment.

N. P. A. BORNHOLDT, *Consul.*

RIGA, *April 6, 1900.*

SPAIN.

BARCELONA.

The total consumption of coal in the Barcelona district may be roughly estimated at about 600,000 tons per annum, of which about 350,000 tons are South Wales, 200,000 Newcastle and Glasgow coal, and about 50,000 tons native coal from the mines in the north of Spain.

Owing to the present high prices of British coals, which are being sold at 31s. 6d. and 32s. ($7.66 and $7.79) per ton, cost, freight, and insurance Barcelona, as against about 21s. ($5.11) per ton, which was the average price, the Spanish coals have found a ready sale here of late, and were the collieries at Gijon and Aviles more extensively worked, there is little doubt but that more native coal would be consumed, for although the quality is not equal to the Welsh coal, it can at present be offered here at a lower price.

In Belmez, in the Province of Andalusia, a good class of coal is found; but, owing to the difficulty of transport, its consumption is limited to the neighborhood of the mines.

The present high prices of coal are attributed to the rise in prices in Great Britain, and to the increased freights consequent upon the war in South Africa.

The usual rate of freight in normal times, from the south of Wales to Barcelona, is 10s. ($2.43) per ton, whereas now the freight is 12s. 6d. ($3.04).

Our coal has been imported to a small extent—on an average about 2,000 tons annually—by the local gas companies for enriching purposes, but now that British coals are so high, the coal merchants here inform me that if the freight rates from American ports to Barcelona were slightly reduced, a good market for American coal would be found in Spain. The present rate of freight from Newport News to Barcelona is 18s. ($4.38) per ton, and this heavily handicaps the sale of our coal here.

The facilities for obtaining freight from British ports are considerable. The steamers leave Barcelona mostly in ballast and obtain return freight by loading at some other Mediterranean port, either with fruit or ore. Ships bringing coal from the United States could get the same class of freight for their return voyage during the summer and autumn.

The question of increased consumption of American coal in Spain would seem to be merely dependent upon the possibility of lowering the freight.

JULIUS L. LAY, *Consul-General.*

BARCELONA, *April 14, 1900.*

CARTAGENA.

The import of American coal is a subject to which I have devoted especial attention for some time past.

The importation of coal at this port during 1899 was about 62,000 tons, and of foundry coke, about 26,000 tons.

Other places in this consular district would import possibly (I have no exact figures) 10,000 or 12,000 tons of coal and 4,000 or 5,000 tons of coke.

Nearly all the coal was from Newcastle (England), the bulk being for steam purposes, with a little gas coal, and a little for use of blacksmiths.

The coke was all from Newcastle, and was, or was supposed to be, best 72-hour foundry coke. This is used here by the lead smelters.

In addition to the foregoing, about 15,000 tons of coal arrived here by rail during the past year, from mines in the interior.

The average price of English coal and coke—cost, freight, and insurance—to this port during recent years has been 19 to 20s. ($4.62 to $4.87) for coal and 26 to 28s. ($6.31 to $6.81) per ton for coke.

I give values in sterling, which is the money employed in coal contracts, and is also the basis on which ocean transportation for American coal would have to be calculated.

Since last year prices have been steadily advancing, and present quotations for Newcastle steam coal and foundry coke—cost, freight, and insurance—to this port are 28 to 29s. ($6.81 to $7.06) and 46 to 48s. ($11.19 to $11.68) per ton, respectively.

Native coal (inferior to the English) costs on rail here about 40 pesetas, equal to 25s. ($5.08) sterling.

Freight rates from Newcastle to this port range from 6 to 11s. ($1.46 to $2.68) per ton on coal and from 11 to 20s. ($2.68 to $4.87) per ton on coke. The lower figures refer to slack times and the higher ones to such times as the present, when business is active and tonnage very scarce.

Freight rates would be higher if the coal and coke were not brought together; but combining the weight of the one with the bulk of the other—the coal as ballast and the coke on the top—the holds are filled up to the hatchways and the steamer is loaded down to her marks.

English coal and coke pay a duty of 2 pesetas 50 centimes per ton, say 1s. 7d. (39 cents), and the ship conveying it pays a so-called "navigation" tax of 50 centimes per ton, say 3.75 pence (7.6 cents). American coal pays a duty of 3 pesetas per ton, equal to 1s. 10d. (44.6 cents), while the navigation tax is 2 pesetas, or 1s. 3d. (30.4 cents).

I give it in tabular form:

	English values.		United States equivalent.
	s.	*d.*	*Cents.*
English:			
Duty (2.50 pesetas)	1	7.00	38.5
Navigation (0.50 pesetas)	0	3.75	7.6
Total	1	10.75	46.1
United States:			
Duty (3 pesetas)	1	10.80	46.2
Navigation (2 pesetas)	1	3.00	30.4
Total	3	1.80	76.6

Thus United States coal is handicapped to the extent of 1s. 3.05d. (30.5 cents) per ton. Although the navigation tax is imposed on the vessel and not on the cargo, it is in fact paid by the latter, because the shipowner charges a higher rate for carrying the merchandise.

The greatest difficulty in the way of selling American coal here is the excessive ocean freight rate. I hear of recent charters to Italian ports at 16 and 18s. (41.3 and 43.7 cents) per ton, and, assuming good steam coal to be worth $2.50, or, say, 10s. 3d. per ton, free on board at United States Eastern ports, it works out here at about English prices.

In attempting to sell American coal in this district, I have met with the following objections from Spanish consumers: First. We do not know the American coal, and trans-Atlantic cargoes are so large (say 400 tons) that we might be saddled with a large quantity of unsuitable coal. Second. You ask us to pay spot cash against shipping documents, while our English friends give us three months' credit. Third. There is no inducement in your prices, because the high freight rate, with extra duty and navigation tax, practically wipe out the benefit of your low free-on-board price.

This is the position to-day. A treaty of commerce would help the development of the coal trade and of many other American interests.

Jos. Bowron, *Consul.*

Carthagena, *April 5, 1900.*

CORUNNA.

The consumption of coal in this district is from 28,000 to 30,000 tons yearly; the quantity imported is about 14,000 tons. The kinds used include the English Fredegar, Nantyglo, Ebbu Vale, and Newport-Aborcarn Black Vein.

The average prices per ton are: English, 55 pesetas ($8.25); Spanish, 50 pesetas ($7.50).

Freight rates per ton are 8 to 10 pesetas ($1.25 to $1.50); customs duties, 2.50 pesetas (38 cents; port charges, 1 peseta (15 cents).

American coal is not known.

Julio Harmony, *Consul.*

Corunna, *April 3, 1900.*

MADRID.

The imported coal used in this district comes from Great Britain, chiefly via the seaports of Santander and Bilbao, some coming by smaller ports.

The "kind or quality" of the coal is that known as bituminous or semibituminous. The prices are very irregular and can not be quoted with exactitude.

So far as I am informed, no American coal is used in this district nor in Spain, though during the last six months, owing to the extraordinary advance in prices of coal at British shipping ports, I am reliably informed that an important railway company in the south and some important dealers desired to use American coal, but found it impossible, the combined cost of the coal and freight from United States ports being about 2 shillings sterling (48.6 cents) per ton above the cost of British coal.

No possible objection could be raised in this country to American coal, but, on the contrary, if it could be imported at even cost with the British coal applicable to the same uses, it would find favor and perhaps preference. The duty is 2.50 pesetas ($0.386) per metric ton of 2,204.6 pounds.[1] The transportation to the interior is by railway.

There are no coal mines in this district, but in other districts, mentioned farther on, there are mines producing coal, some of very good quality and others inferior.

The production of coal from Spanish mines, according to the latest data available, is, per annum, as follows:

	Tons.
Asturias	1,542,974
Cordova	320,152
Ciudad Real	203,000
Leon	144,700
Sevilla	121,074
Palencia	102,900
Gerona	32,000

The final figures for 1899 will, it is said, show a considerable increase over the above.

According to credible information, important developments of coal deposits are being made in Oviedo and Teruel; the coal in the former is said to be an excellent steam coal, and that in the latter suitable for cooking; and, furthermore, a blast furnace is now being erected in this region to use local ores smelted with coke to be made on the ground.

The furnace is expected to be in blast in a few months, under the direction of a Scotch furnace master.

The importation of coal and coke into Spain amounts, approximately, to 1,600,000 tons per annum.

Coal is very little used in domestic economy here, and that consumed in the few larger cities is in the form of coke obtained from the local gas companies.

The coke imported is chiefly used by the lead smelters.

DWIGHT T. REED, *Vice-Consul.*

MADRID, *June 19, 1900.*

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[1] Note by Bureau of Foreign Commerce.—The duty on American coal is 3 pesetas (46.2 cents). See report from Carthagena.

SUPPLEMENTAL.

In the year 1899, according to official data, the production of coal in Spain reached the amount of 2,672,194 metric tons of 2,204.6 pounds, and of lignite, 70,195 metric tons. This tonnage was produced in 7 provinces, viz: Ciudad Real, Gerona, Leon, Oviedo, Palencia, Cordova, and Sevilla, and includes 100,300 tons called anthracite, produced in Cordova, Sevilla, Oviedo (Asturias), Leon, and Palencia.

The importation of coal into Spain in 1899 amounted to 1,584,999 metric tons, an excess over 1898 of 340,653. The importation of coke reckoned at the rate, compared with coal, of 72 per cent, amounted to 208,789 metric tons—an excess over 1898 of 17,468; and, deducting the exportations of coal, 8,084 metric tons, the total consumption of domestic and imported coal, lignite, and coke in Spain in 1899 amounted to 4,609,521 metric tons, an excess over 1898 of 594,542, or a total consumption of a trifle more than one-fourth of a ton per capita.

The district of Asturias, in the Province of Oviedo, is the principal coal-producing region, reaching in 1899 the amount of 1,604,028 metric tons, this total coming from 18 works, producing from 11,620 tons to 277,270 tons each, and a number of smaller ones, aggregating 115,000 tons.

The importations of coal and coke were chiefly at Barcelona—482,443 tons of coal and 4,591 tons of coke; and Bilbao—402,766 tons of coal and 87,186 tons of coke, these two ports taking more than one-half the entire imports. The balance was accredited to the ports of Cadiz, Huelva, and Sevilla, on the Atlantic, and Valencia, Cartagena, Malaga (Almeria), Portbou, and Mazarron, on the Mediterranean coasts; the most important in rank being Cadiz, importing 86,947 tons of coal and no coke, and Valencia, importing 80,912 tons of coal and no coke.

The total consumption of coke, already noted, but mentioned here for information, was 730,690 tons, of which 351,901 tons were produced from domestic coal, 170,000 tons were produced by the gas companies (as near as can be determined) and 208,789 tons were imported.

The principal railway companies are owners of considerable coal-producing properties.

The company "Andaluces," in the south, operates at Belmez, in the province of Cordova, the company "Madrid Zaragaza Alicanti" also operates in the same region and in the vicinity of Sevilla.

The company "del Norte de España," the Northern Railway, owns many thousands of acres of coal property, and maintains important operations in the province of Palencia.

The relative consumption of domestic and foreign coal by the railway companies is not, at the moment, obtainable.

The consumption of coke is principally by the iron and lead smelters and for some industrial uses, leaving a very small part for domestic purposes.

The consumption of coal by the steamer traffic, coastwise and foreign, takes a large portion of the imports. Exact data is not available, but it is admittedly sufficient to reduce the per capita consumption in the country to an almost insignificant figure.

The total consumption of coal, coke, and lignite in this country by iron and lead smelters, railways, steamers, industrial and domestic consumers is only about one-fourth of a ton per capita, while in the United States it is said to be about 3 tons per capita, or twelve times more.

Imported cargoes are discharged upon faith of the weight expressed in the certificate given by the Spanish consul at the port of shipment, accompanied by bills of lading duly acknowledged and conforming therewith. However, before the cargo is discharged the vessel is visited and surveyed by an official to verify the capacity in comparison with the declared cargo. In such survey, the official must consider each cubic meter (35.316 cubic feet) equivalent to 800 kilograms (1,763.28 pounds) of coal, or 450 kilograms (991.26 pounds) of coke.

If such survey results in any appreciable discrepancy, or is not practically in accord with the declarations in the bills of lading and consular certificate, the cargo is weighed and duty charged thereon accordingly. Coal and coke pay the same duty upon the actual weight.

Taxes upon coal properties are levied by the Government at the statutory rate of 4 pesetas ($0.762) per hectare (2.4711 acres) per annum, and 3 per cent upon the value of the product, at the mine, prepared for sale.

Transportation charges upon coal, by railways, are in most cases excessively high. On the Andalusia railways the charge is at the rate of 0.07 of a peseta ($0.01351) per metric ton per kilometer (0.62137 of a mile), or, $0.0184 per ton per mile, but they admit of no shipment upon which they recover less than 10.70 pesetas ($2.0651), and coke is charged at one-seventh more than coal. The charges on coal or coke from Huelva to Madrid amount to 32.50 pesetas ($6.2725) per metric ton, provided, always, that 8 tons of coke are charged the rate for 10 tons of coal; from Seville, the rate is about 75 cents per ton less than from Huelva. From Bilbao and Santander the rate to Madrid, upon similar terms, is the equivalent of $5.211 per metric ton. In addition to the foregoing, there are incidental charges at stations and for carting, handling, etc.

The laws governing coal mining, and, in fact, other mining operations, are excellent in their defined purpose and intent. Workings are subject to official inspection to prevent "robbing," and to see that they are conducted in a manner conforming with recognized methods of proper mining.

On January 30, 1900, the Queen Regent approved a new law providing for indemnities to the injured in mines according as they are temporarily or permanently incapacitated for work. ' Medical examinations and attendance are provided, and, in case of death, indemnifications to heirs. The regulations for the execution of this law will be promulgated to take effect the last day of July of this year.

Another law was approved by the Queen Regent March 13, 1900, relating to the employment of women, boys, and girls, not only in mining operations, but in all industrial and commercial affairs. This law is to take effect in September.

DWIGHT T. REED, *Vice-Consul.*

MADRID, *June 25, 1900.*

MALAGA.

The quantity of foreign coal imported here during the past four years was 123,902 tons, divided as follows: 1896, 29,150 tons; 1897, 31,695; 1898, 27,847; 1899, 35,211.

All this coal came from England, chiefly from Cowpens, West Hartley, or Bothel, Newcastle. There is also a little Scotch coal imported, the best being the Bent Hartley, Glasgow, and Hamilton Ell. Prices for English coal to-day are 27s. to 28s. ($6.57 to $6.81) per ton c. i. f.

There are several mines in Andalusia producing a fair quality of coal, notably the Belmez and Peñaroya mines, near Cordoba. Exploitations are now going on near Antequera, province of Malaga. This coal, however, has a heating force of from 10 to 15 per cent less than the English.

The prices at the mines are about 28 pesetas ($4.20) per ton. The freight rate to Malaga is very heavy, from 13 to 15 pesetas ($1.95 to $2.25) per ton.

From 15,000 to 20,000 tons of American coal, similar to Newcastle coal, might readily be sold here annually, provided it could be landed at the same or a less price than English coal.

R. M. BARTLEMAN, *Consul.*

MALAGA, *April 3, 1900.*

SUPPLEMENTAL.

Referring to my previous report on coal, I append translation of a clipping from the Union Mercantil of to-day.

Dealers of coal might place themselves in communication, direct or through this office, with the following parties: La Industria Malagueña (cotton mills employing 6,000 hands), La Aurora (cotton mills employing 2,500 hands), Compañia de la Fabrica del Gas (gas works), La Constancia (iron mills employing 2,600 hands), English Electric Light Company, Fiat Lux (German Electric Light Company), Sociedad Azucarera Larios (sugar refinery), and Hijos de A. I. Gomez (chocolate factory).

All communications with the above-named parties should be in the Spanish language.

As previously reported, 15,000 to 20,000 tons of American coal might be annually sold in this port.

R. M. BARTLEMAN, *Consul*.

MALAGA, *May 18, 1900.*

[Clipping from Union Mercantil.]

Owing to scarcity and high prices of coal, several industries here are somewhat disturbed as to the future.

There is increasing fear in Malaga, where manufacturing industries, although not so great as at other points, consume, nevertheless, a large quantity of coal in workshops and factories.

The excessively high prices may produce disturbances in labor, which would affect many families.

VALENCIA.

The volume of coal imported into Valencia shows a steady yearly increase, totals of the past twelve months figuring up to 80,000 tons. Supplies are drawn almost exclusively from England, Cardiff bituminous qualities and patent fuel forming the great bulk of the coal consumed in this district. Anthracite coal is not appreciated, because outside the small foreign colony grates and stoves are practically unknown. All the important railway companies have adopted patent fuel, and the proprietors of the many orange plantations, which have to be artificially irrigated, also give the preference to patent fuel for their small 2 and 5 horse power engines, as they find it cleaner and more economical, the waste in handling and carting over bad roads up country being much smaller than in the case of ordinary uncompressed coal.

The only coal mines which have been tapped in this neighborhood are at Dos Aguas, some 16 miles distant from Valencia, but the quality extracted up to the present is so inferior as to be practically useless for commercial purposes.

The duty paid on imported coal is 2.50 pesetas per ton of 1,000 kilos (2,204.6 pounds) and half a peseta pro tempore war tax (about 42 cents altogether). Ships do not coal here, nor, indeed, at any Spanish port, except when necessity or unforeseen shortness of supply compels them, and then they take only sufficient to reach Gibraltar, where they can purchase cheaper with much lower port dues, coal freights from England to Gibraltar generally ruling 3s. to 4s. ($0.73 to $0.97) per ton less than to Spanish ports.

The present value of British coal, cost and freight Valencia, is 45 pesetas a ton (about $6.55). Leading merchants in the trade do not regard these high prices as likely to be permanent, but rather as attributable to passing conditions created by the South African war and the strikes in various continental coal fields.

HORACE LEE WASHINGTON,
Consul.

VALENCIA, *April 6, 1900.*

SUPPLEMENTAL.

Consul Washington writes from Valencia, April 24, 1900:

After conversations and correspondence with the firm of J. B. Carles & Co., of Valencia, on the subject of United States exports that might be marketed here, these gentlemen have written me a letter, copy of which is inclosed. The writers rank among the wealthiest houses in Valencia, a city with an officially estimated population of nearly 300,000, and their proposition to deal in full cargoes is in line, I am told, with their usual methods.

[Copy of letter from J. B. Carles & Co.,[1] bankers, to United States consul.]

DEAR SIR: The consumption of coal is very large in Spain, English coal being principally used. Valencia imports some 150,000 tons per annum from Great Britain—principally Newport and Swansea. From Swansea, only patent fuel is imported for railways and small factories.

Present price of best steam coal is about 21s. ($5.11) f. o. b. Cardiff; patent fuel, 19s. ($4.62) f. o. b. Swansea, and gas, 16s. ($3.89) f. o. b. Newcastle. Freight to Valencia is about 10s. ($2.43). With freight from the United States at, say, 16s. ($3.89) the States ought to be able to compete for the supply of Valencia in manufacturing coal and fuel, at any rate.

What we want is best semibituminous colliery screened coal, not too friable, and patent fuel in 9-pound blocks, well compressed and composed of semibituminous small with a slight mixture of anthracite.

We solicit offers from collieries or merchants, at cost and freight price in English money per English ton, payable net cash against documents in London by our bankers, Credit Lyonnais or Comptoir National d'Escompte de Paris.

Steamers have no dues of any kind to pay at Valencia, not even harbor dues, all being paid by receivers of the cargo. Terms of charter, those of the Chamber of Shipping, Welsh Coal Charter, 1896. We would be prepared to take full cargoes of 3,000 to 5,000 tons.

Yours, truly, J. B. CARLES & Co.

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[1] Telegraphic address: Carles, Valencia.

SWEDEN.

STOCKHOLM.

The industries of Sweden are almost entirely dependent upon the importation of coal. In a few instances, water power is utilized. The home coal supply is very small. All coals at present brought into the Kingdom are from England, and are supplied from the well-known mines of Yorkshire, Northumberland, and Durham; also from Scotch and Welsh districts. The first named are used mostly for steam purposes, the Scotch is used on the railways, and the Welsh by the navy and by many industrial works where smokeless coal is necessary. The coals named are all bituminous. The anthracite is used only for household purposes.

The whole importation of coal has recently been about 3,000,000 tons per year. American coal has never been used, but the prominent importers are considering the possibility of employing it. English coal has recently reached a very high figure, and it has been possible for neighboring countries, as, for instance, Russia, to import American coal.

The average price of coal in Sweden has been, for the past year, about $5 per ton.

There are no regular lines from American ports, and consequently to quote a freight rate from the United States seaboard to a Swedish port is impossible. I think that with ordinary tramp steamers of no larger size than 10,000 tons, it might be figured as costing about 14s., or $3.40, per ton.

One of the coal firms here is just now sending over a young man to investigate the matter.

To sell coal to Sweden depends upon the price at which it can be offered and the quality of the article, as compared with the coal mentioned above. To judge of the quality of coal now obtained from Great Britain, I send the average analysis.

The prices of English coal at present writing are from $6 to $7 per ton at Swedish ports and in some instances a fraction over these figures.

EDWARD D. WINSLOW,
Consul-General.

STOCKHOLM, *April 10, 1900.*

Analysis of British coal.

	South Wales coal	Durham coal.	South Yorkshire coal.	Scotch coal.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Carbon	80.08	78.65	77.40	71.88
Hydrogen	5.03	4.65	4.96	4.52
Oxygen	5.20	13.66	7.77	11.10
Nitrogen			1.55	1.53
Sulphur	.42	.55	.92	1.15
Ash	5.05	2.49	3.90	.98
Coke	64.72	65	63	56

SUPPLEMENTAL.

In reply to a New York correspondent (to whom copy has been sent), Mr. Winslow writes from Stockholm:

At no time in the history of the coal trade have conditions been more propitious for exporting coal from the United States to Sweden. High prices are asked and paid for the English article. Messrs. G. & L. Beijer, of this city, imported in 1899 nearly one-fifth of the coal brought into Sweden.

Importers here must know whether the coal offered by American exporters is bituminous or nonbituminous, and whether it is hard or soft; whether it is once, twice, or three times screened in shipping, etc. It is also important to know the measurement in cubic feet of 1 ton, and the name of the district where mined.

The firm of G. & L. Beijer has been in communication with the Swedish Government, and it is possible that if they could produce a sufficient guaranty as to the quality, etc., of American coal they would be able to sell a trial cargo of, say, 2,000 to 3,000 tons. The sizes of the cargoes are immaterial, and boats up to 4,000 tons could be handled. I think, however, the trade would prefer cargoes of from 2,000 to 3,000 tons.

An idea of the amount of coal used by the Swedish railways may be obtained from a glance at the purchases made by them for the year 1899. I find that they bought 48,000 tons of native coal (the Swedish coal is of a very poor quality and of little value) and 330,000 tons of English coal at a cost of over 5,500,000 crowns ($1,474,000).

Ships and steamers that bring cargoes of coal from the United States will find return freight of lumber or iron ore to the Continent or England. From the latter places cargoes are easily obtained for ports on the Atlantic coast. There are ships at present engaged in the oil trade that return to America in ballast and make it pay. Large quantities of steel are sent to the United States which now go via Hull or Hamburg, and are thus reloaded. The expense of these shipments must be much larger than if they were direct. The requirements of Sweden for coal are increasing every year; the railroads are being extended and more manufacturing is being done annually. The people are using more coal for household purposes, on account of the great rise in the price of wood.

Exporters wishing to try this market will oblige by sending to the office of the consul-general an analysis of steam coal as well as of anthracite, and inform me what telegraph code they use. I think some of the large importers will send an order.

GOTHENBURG.

Coal is found in the province of Scania (Skåne), in the southern part of Sweden. There are seven coal fields, with some ten or fifteen mines where coal and clay are obtained. The most important fields are: Höganäs, close to the city of Helsingborg; Billesholm, Bjuf, and Skromberga. The mean production of coal during the period 1889–1893 amounted to 194,300 tons per year. Since that time the output has been as follows:

	Tons.
1893	199,933
1894	195,950
1895	223,652
1896	225,848
1897	224,343

IMPORT.

I am informed that the Swedish coal is not only insufficient in quantity, but also inferior in quality and difficult to use without specially constructed furnaces. The greatest quantity of coal consumed is therefore imported, principally from the different coal fields in England and Scotland, and a little from Westphalia, Germany.

The import of coal into Sweden during the year 1898—the latest official figure I have obtained—amounted to 29,905,639 hectoliters, estimated to be equal to 2,392,451 tons.

Although not up to date, the following table shows that the import of coal and coke is increasing:

Year.	Hectoliters.	Tons.
1894	25,451,455	2,578,778
1895	25,298,251	2,562,748
1896	26,356,796	2,661,591
1897	29,495,130	2,988,291
1898	31,554,000	3,198,167

CONSULAR DISTRICT OF GOTHENBURG.

The following table will show the relative importance of certain cities on the west coast of Sweden, according to the amount of coal imported during the year 1898:

Customs district.	Hectoliters.	Tons.
Gothenburg	6,446,887	653,207
Malmö	3,818,363	386,989
Helsingborg	1,901,424	192,656
Landskrona	878,520	89,012
Halmstad	547,156	55,438
Varberg	816,998	82,129
Uddevalla	290,444	29,428
Strömstad	26,420	2,676
Falkenberg	8,880	899
Marstrand	4,250	431

According to semiofficial statistics, the import of coal at Gothenburg was as follows:

	Tons.
1896	585,791
1897	612,849
1898	654,135
1899	801,665

This seems to be an exceptionally good time for the introduction of American coal here, providing prices are not too high. During the last two years the price of coal has increased by 50 to 100 per cent, and, as far as can be judged, the market is firm. The present war in Africa has undoubtedly tended to advance the prices of coal here, and it is difficult to foretell what effect peace in the Transvaal might have in this matter.

Coals mostly used in Gothenburg are: Best Newcastle, Davisons, Hastings, and Bothal coals, soft steam; Lambton steam coals from Durham; Bent Hartley, Scotland Hamilton, and similar kinds of Scotch coals, and Best South Yorkshire hard steam coals. Prices as stated to me are from 24s. to 25s. ($5.84 to $6.09) per long ton, cost, insurance, and freight, Gothenburg; usual terms, cash, or three months' acceptance; freight, about 6s. ($1.46) per ton.

Anthracite or hard coals are used in the households, but very little. All houses are furnished with comparatively expensive, permanent, Dutch clay stoves (one for each room), and in these stoves only wood is burned. Steam heat and hot water are lately in use in some of the new large buildings.

MALMÖ.

Mr. Peter M. Flensburg, the United States Agent, reports as follows:

Total import during 1899, 335,314 tons. Coals mostly in demand: Best South Yorkshire steam coal; Best Newcastle steam coal; steam coal from Scotland; Sunderland nuts; Hull nuts. Present price: 23s. to 24s. ($5.60 to $5.84) for steam, and 22s. ($5.36) for nuts. No American coal imported. Present freight, about 6s. ($1.46).

HELSINGBORG.

Our agent, Mr. Lars Virgin, reports the following:

Total import of coal last year, 183,910 tons. Kinds and qualities used: Household and steam coals, different qualities.

Prices: Cowdenbeath (Scotch), 23s. 6d. ($5.72) per ton; Newcastle, 24s. 6d. ($5.96) per ton; anthracite (Cardiff), 30s. ($7.29) per ton.

The freight rates are: From Methel and Newcastle, 7s. ($1.70) per ton; from Cardiff, 10s. ($2.43) per ton.

American coals are hitherto, as far as I have been able to find out, not imported at Helsingborg.

GENERAL.

Hardly any one of the coal importers here can take as much as a whole cargo at one time, and it would thus be necessary to have an agent here soliciting orders from the different firms. As the quality of American coal is entirely unknown, it would also be necessary to send general description and official analysis of the different kinds of American coal.

Mean depth of the bay at Gothenburg, 23 English feet; of the harbor proper, 19 English feet.

There is no import duty on coal.

I give below a list of the importers of coal in this city; for further information and correspondence I beg to refer American exporters to Mr. A. J. Dannberg, No. 1 Skeppsbron, this city, who has acted as importing agent in this line for the last thirty years.

Importers of coal.—August Carlson & Co., Wilson & Co.,[1] Tycho Roberg (forwarding agent), Wallenius & Holter, Fr. d'Orchimont, Jonsson, Sternhagen & Co., Adolf Bratt & Co.,[1] H. Alpen, Göteborgs Stads Gasverk,[2] Anderson & Lindberg, Meurling, Nybelin & Co. (forwarding agents).

ROBERT S. S. BERGH, *Consul.*

GOTHENBURG, *April 9, 1900.*

SUPPLEMENTAL.

Consul Bergh writes from Gothenburg, April 12, 1900:

As a supplement to my report of the 9th instant, I inclose translation of an advertisement published in the Göteborgs Handels—och Sjöfarts-Tidning.

The time for delivery is so short that Americans can not compete in this case; but as kind of coal desired, terms, etc., are mentioned, I thought the advertisement might be of interest.

DELIVERY OF COAL.

Sealed bids on below-mentioned quantities of coal will be received by Mr. W. Luttropp, Malmö, up to Wednesday, the 18th instant, 11 o'clock a. m.:

	Tons.
Jordberga Sockerfabriksaktiebolag (to be delivered at Malmö or Trelleborg)	5,500
Lunds Sockerfabriksaktiebolag (to be delivered at Malmö)	5,500
Örtofta Sockerfabriksaktiebolag (to be delivered at Malmö)	4,000
Kjeflinge Sockerfabriksaktiebolag (to be delivered at Landskrona)	4,000

Jordberga, Lunds, and Örtofta sugar manufacturing companies entertain offerings only of best South Yorkshire steam coal (Wombwell Main, Edmonds Main, Michell Main, Darfields Main, and other equally good sorts of coal), but for the Kjeflinge Company may also be offered best Newcastle steam coal (Bothal, Cowpen, Davisons, Hastings, and other equally good coals).

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[1] Would probably not import American coals. They own steamers plying between Great Britain and Sweden.

[2] The city gasworks, Gothenburg.

The price must be stated separately for each quantity and for each kind of coal and be calculated per discharged English ton (1,016 kilograms) and weighed on the railroad scales of the respective factories.

Payment to be made for each accepted cargo fourteen days after unloading, either cash or with three months' acceptance and lowest bank discount, at the purchaser's option.

The coals to be delivered free from bulwark of vessel at wharf and quantity unloaded per day not to exceed 225 tons. The deliveries to be effected successively prior to the 10th of September this year, and steamers not to be dispatched to same factory at shorter intervals than eight days.

The coals must be large and free from coal dust, and original mine certificates must be exhibited for each cargo.

Bids should be offered separately for each company's demand or supply of coal, and seller is at liberty to tender bids to one or several of the companies mentioned.

If so desired, the seller is obliged to furnish acceptable security for the fulfillment of contract.

Malmö, April 6, 1900.

A. J. ROMAN.
LORENTZ NILSSON.
W. LUTTROPP.
A. C. JAKOBAEUS.
C. TRANCHELL.

NORWAY.

CHRISTIANIA.

During the past long and unusually cold winter Norway has, like other European countries, experienced a scarcity of coal for all purposes. The prices have ranged uncommonly high. The cause may be ascribed to several concurrent circumstances, such as the South African war, strikes among the miners in coal-producing districts in eastern Europe, and the great activity in railroad building and industries of Russia.

Norway imports, with a few insignificant exceptions which will be mentioned later, all her coal and also a large share of her coke from Great Britain. Bituminous coal is used greatly in excess of the anthracite varieties. To illustrate the rise in prices, the following quotations will serve:

Christiania, August 19, 1899: Best Newcastle steam, 13s. 6d. ($3.28), f. o. b. Blyth; best Newcastle smalls, 6s. 6d. ($1.58), f. o. b. Blyth; best Hamilton Ells, 11s. 3d. ($2.74), f. o. b. Blyth.

Christiania, April 11, 1900: Best Newcastle steam, 19s. ($4.62), f. o. b. Blyth; best Newcastle smalls, 12s. ($2.92), f. o. b. Blyth; best Hamilton Ells, 16s. 6d. ($4.01), f. o. b. Grangemouth.

The freight rates from Blyth to Christiania are about the same now as then, one of the last fixtures being 6s. 6d. ($1.58) for steamer of 1,000 tons.

The import of coal into Norway in the year 1898 exceeded 17,250,000 kroners ($4,623,000) in value.

The import of coal and coke was during the three first quarters (January 1 to September 30) of the year 1899 no less than 16,000,000 kroners ($4,288,000) in value. The import since that time has been unusually heavy.

Some complaints have been heard of late that British coal is becoming inferior in quality. That American mine owners could take up the competition with fair prospect of success and that this is the propitious time for so doing, is certain. The most serious obstacle to American success will, of course, be the long and expensive transportation. I should think that it might answer for a beginning to depend on the many vessels engaged in irregular freight trade between American and European ports; but regular lines, owned or at least controlled by Americans, should be set in operation as soon as the traffic shall have been permanently established.

Norway charges no import duty whatever on coal.

No American coal has as yet been imported to this country, but I am aware that at least one of the large American coal companies has for some time had its attention directed this way.

The large deposits of peat in Norway have of late received much attention from political economists. Peat has been used in Norway as fuel from times immemorial, and it has always been of great practical value to the people. So far, it has appeared but very seldom as an article of commerce, but owing to increasing scarcity of wood in some sections, and the high prices for coal and coke ruling everywhere, it is likely to be developed. According to official reports, the extent of the peat bogs in Norwegian square miles in the Scandinavian countries are as follows:

Norway	350
Sweden	800
Denmark	40

Of this, about one-half is stated to be so located that it could be reached for industrial purposes. It is claimed that peat could be used with profit for nearly all purposes for which coal is now employed, and that the deposits would last, as far as Norway is concerned, about one thousand years. So far the peat is cut and prepared in a small way, for domestic use only, by the farmers and crofters. It is found on the west coast and in the north on nearly every inhabited place It is cut by spade and sun dried, and the method is slow and expensive.

Some few years ago, an invention was made and patented in Norway for the production of coal from peat by the application of heat and compression. At least one factory was started, and some coal was actually manufactured by this process. The product was offered and sold in the markets, but as nothing has of late been heard from the enterprise, I presume it is safe to conclude that it terminated in failure. Whether peat will ever become a serious rival of coal for industrial purposes is a problem, but it may with safety be assumed that this will not be the case for a very long time. For domestic use, its consumption will in all probability slowly but gradually increase, but being an inferior and not overcheap fuel, coal at a reasonable price will always find a market.

A German, Theodor Lerner by name, has "taken a claim" on Bear Island, in the Arctic Ocean, and there opened what he declares to be rich coal mines. A small cargo of this coal was brought to Troms last summer and there sold. The quality was pronounced fair. Bear Island, or Beeren Island, belongs to nobody in particular, but both Norway and Russia will be likely to dispute Mr. Lerner's ownership if his mine should prove worth having.

On one of the Lofoden islands coal was discovered some years ago and a shaft sunk. As I understand the case, coal does not appear in paying quantity.

As distributing points for American coal in Norway, I believe Christiania, Christiansand, and Bergen are best located.

HENRY BORDEWICH, *Consul.*

CHRISTIANIA, *April 17, 1900.*

BERGEN.

The importation of coals into this consular district during 1899 amounted to:

	Tons.
Bergen	140,000
Stavanger	46,000
Drontheim	110,000

Some 64,000 tons were distributed among the smaller cities, making for the whole district 360,000 tons.

The coals used here are mostly imported from Cardiff, Newcastle, West Hartlepool, Hull, South Shields, and Blyth. They generally consist of Northumbrian steam, Scotch Ell, Scotch Fifeshire steam, South Yorkshire steam, and, to a smaller extent, Cardiff smokeless steam coals. Further, some Welsh anthracite nut and Sunderland smithy coals are used.

The present quotations per ton range about as follows: Northumbrian steam, Scotch, and South Yorkshire coals, 22s. 6d. to 26s. ($5.47 to $6.33); Cardiff smokeless, 28 to 29s. ($6.81 to $7.05); anthracite nuts, 25s. to 27s. ($6.08 to $6.57); smithy coal, 22s. to 25s. ($5.35 to $6.08). These quotations are c. i. f. Norwegian ports.

Norway's annual coal import amounts to about 1,300,000 tons, duty free. The house and steam coals mostly used contain as little stony and slaty matter as possible, burn freely, and are not of a breakable character. They are jet black and shiny.

At Spitzbergen (Beeren Island) deposits of coal have been found, but as yet it is not known to what extent they can be worked. American coals have never been imported into Norway, but with the present high prices on British coals, I believe that before long there will be good chances for our coal mine owners and merchants to enter into competition with Great Britain. I am corresponding with a merchant in South Sweden about the introduction of American coals for railroad and steamship consumption, and I hope that I shall, in time, be able to introduce American coals into Scandinavia.

VICTOR E. NELSON, *Consul.*

BERGEN, *May 12, 1900.*

SWITZERLAND.

AARAU.

There being no statistics of imports into the different cantons of Switzerland, it is not possible to say exactly what amount of coal this district consumes, but from a reliable source I have obtained information from which it would appear that the consumption is about 40,000 tons per annum, divided as follows:

For industrial purposes, about 30,000 tons of lump coal, nut coal, briquettes, and braisettes, imported principally from the Saar. For private consumption, about 10,000 tons of anthracite and briquettes of bituminous coal, imported from Belgium, the Ruhr, and the Saar.

There are no coal mines in Switzerland, and consequently all the coal consumed has to be brought from foreign countries. So far, no American coal has been imported into this district. I quote an editorial from the Paris edition of the New York Herald of May 1, 1900, which may be of interest:

THE COAL OUTLOOK.

The London Economist points out that the high prices of coal are having a serious effect on the industrial situation. "From all parts of the country," it says, "we hear of a distinct abatement in the stream of new business, and from all the explanation is that high prices have checked the placing of fresh orders." The decline in shipbuilding that has set in is also attributed largely to the same cause.

A survey of the situation leads our contemporary to the conclusion that an early reduction in prices is hardly to be expected, though it believes they will not rise much further, even in view of the pressure of the shipping season and the heavy exports to points of North Russia, which have been inaccessible during the winter.

The indications now are that American coal may become an important factor in the market. Even with the higher trans-Atlantic freight rates, it can be shipped with a profit to meet the European demand. Already, the tide of these shipments has set in to Russia, Italian, French, and German ports, and bids fair to increase if the present high prices are maintained.

HENRY H. MORGAN, *Consul.*

AARAU, *May 5, 1900.*

BASEL.

No statistics are obtainable as to the amount of coal consumed in this consular district, comprising the cantons of Basel City, Basel-land, and Solothurn; but there arrive daily in the city of Basel about 500 double carloads of coal for local consumption, for distribution to other parts of the country, and in transit to Italy by the St. Gotthard tunnel. This makes an average of 5,000 tons daily, or about 1,500,000 tons a year.

Of this quantity, 1,250,000 tons are for consumption in the country, and it may be assumed that this figure represents substantially the entire demand for coal in Switzerland, as nearly all the importations of coal pass the frontier at Basel.

Coal is employed here for both heating and manufacturing purposes. For heating and cooking nut coal—bituminous—of the following sizes is used: 5 by 8, 2.5 by 5, 2 by 4 centimeters; in English measure equal to about 2 by 3, 1 by 2, four-fifths by 1.5 inches. For industrial purposes, sifted, open-burning and nut coal of varying dimensions is used, viz: 5 by 8, 2.5 by 5, 1.5 by 3, 1 by 2 centimeters; equivalent to 2 by 3, 1 by 2, three-fifths by 1½, two-fifths by four-fifths inch.

Lump coal for industrial purposes is delivered free in Basel by the double carload of 10 tons at 330 to 370 francs, or, in American weights and currency, at $6.37 to $7.14 per ton of 2,205 pounds.

For household purposes, there is used English, Belgian, or German anthracite or nut coal, at 440 to 490 francs per double carload of 10 tons, equivalent to $8.49 to $9.45 per ton.

It should be added that the Swiss duty on coal and coke of all kinds is merely nominal, amounting to about 4 cents a ton. It is imposed not for revenue, but for statistical purposes and control.

The present supply comes from Germany, France, and Belgium, only small quantities being furnished by England and Austria. The country first named furnishes nearly three-fourths of the whole.

So far as known, American coals have not yet been shipped to Switzerland, but there is at present a very eager desire on the part of dealers and manufacturers to introduce them. The inland position of the country is a serious obstacle to the realization of this purpose; but the extraordinary scarcity of coal and its high price during the last months have caused dealers to consider the matter seriously, and, so far as coke is concerned, have led to definite negotiations with American producers. As long ago as last October, the Aluminium-Industrie-Aktien-Gesellschaft of Neuhausen made propositions through this consulate to American coke manufacturers for delivery of the large amount of that article used by them, which they could no longer procure in Europe at reasonable prices. The proposition of this company was made known to Americans engaged in the coke business both directly and through the agency of the Department of State,[1] but contracts could not be made at that time, owing to the excessive cost of transportation.

Just as soon as this question of freight can be satisfactorily solved, the Swiss will be as eager to buy our coal as we are to sell it. There is no prejudice against it, as it does not come into competition with any local product. Even now, the dealer who has furnished the consulate with most of the information contained in this report, Mr. Carl Geldner, states that he would be glad to consider offers for American coal, to be delivered free at Rotterdam. Price lists of boiler coal, lump coal, and gas coal, with indication for the latter of the amount of gas and of coke produced, would be particularly acceptable. This dealer once procured from Marseilles as an experiment a small quantity of American anthracite coal. It can only be used in American grates, and was found to be at that time rather expensive.

English coal arrives in Switzerland by way of Rotterdam, where it is transferred to small boats and carried up the Rhine to Mannheim, whence it comes by rail to Basel. The freight charges are as follows:

Rotterdam to Mannheim, months of March to August, 35 marks per double carload of 10 tons, or 83 cents a ton. Same route during seven winter months, 45 marks for same quantity, or $1.07 per ton.

Railway freight from Mannheim to Basel is at present 72.10 francs per double carload, or $1.39 per ton. From seaport to Basel the freight on American coal would thus amount, at present rates, to $2.22 per ton during five months of the year, and $2.46 per ton during the remaining seven months. This sum added to the $4, which is said to be the present cost of carrying a ton of fuel across the Atlantic, would make the total carrying charges from American seaports to Switzerland at least $6.22.

It would appear that any material reduction in these rates must be made exclusively in the sea freight. The river and rail tariff are about as low as they can be expected to be placed. The Rhine-Rhone Canal, the completion of which from Huningen to Basel would facilitate and cheapen the transport of the German coal now in part brought by it, would not be a factor, so far as merchandise from America is concerned.

GEORGE GIFFORD, *Consul.*

BASEL, *April 28, 1900.*

BERNE.

In connection with my report on "Opening for American coal in Germany and Switzerland," published in Advance Sheets No. 404,

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[1] See Consular Reports No. 231, December, 1899; Advance Sheets No. 579, November 14.

April 19, and in Consular Reports No. 225, June, 1899, I submit the following table showing the coal import into Switzerland:

Year.	Quintals.[1]	Value.	
		Francs.	United States equivalent.
1898	13,011,534	35,481,372	$6,847,803
1899	14,062,771	44,086,382	7,929,671

[1] 1 quintal = 220.46 pounds.

The average price per metric ton was 27.20 francs ($5.249) for 1898, and 29.20 francs ($5.635) for 1899.

The supply for 1899 came from the following countries:

Country.	Quintals.	Value.		Average price per metric ton.	
		Francs.	United States equivalent.	Francs.	United States equivalent.
Germany	11,128,317	31,159,288	$6,013,742	28.00	$5.40
France	1,677,863	5,117,482	987,674	30.50	5.88
Belgium	1,061,818	4,087,999	788,984	38.50	7.43
England	111,062	499,779	95,457	45.00	8.68
Austria	83,711	221,834	42,814	26.50	5.11
Total	14,062,771	41,086,382	7,929,671	....	....

At the suggestion of representatives of different railroads here, I wrote on November 23, 1899, to the president of a railroad company in the United States who is also interested in coal mining, from which letter I give the following extracts:

> Switzerland is a ready market for at least 1,000,000 tons of locomotive coal per year; coal such as is used on your railroad. One of the five principal railroads wants me to submit a price for 115,000 tons, its one year's need, and it is ready to combine with the other four railroads for the delivery of at least 500,000 tons. The other half a million tons would be taken up for fuel by large factories. At present the price paid at the mouth of the mines for German Saar coal, per metric ton, is $3.21; duty and freight to Basel, $1.68; total, $4.89. For Ruhr coal, $3.57; freight and duty to Basel, $1.39; total, $4.96. (Metric ton equals 2,204.6 pounds.) The duty is only $0.04 per ton.
>
> To my idea, the matter would resolve itself into a problem of transportation only. Knowing the abundance of coal on the line of your railroad, the question would be, At what price could coal be furnished at the port of Rotterdam, of course in shfploads, either tramp or sailing vessels? If this point be settled, I shall ascertain the exact cost of handling the coal via the Rhine to Basel, or else try to get special through rates for train loads.
>
> My contention has been that our coal is cleaner and gives more heat than the Ruhr or Saar coal, and if this be demonstrated there is no doubt that the railroads would pay more than the prices given as the cost of the coal used at present. I have been speaking of Switzerland only, but the northern part of Italy is open to us, as it depends on the same coal.

I am sorry to say that I never received an answer.

Further correspondence with brokers in New York brought, on April 21, an offer to deliver bituminous coal, such as is used by the railroads and factories in the United States, for $2.40 per ton, delivered f. o. b. Baltimore steamer. The freight rate to Rotterdam in the immediate future is quoted to be 11s. 6d. per long ton ($2.79) f. o. b., vessel to be furnished by buyer at Baltimore. At that price, a ton of coal delivered in Rotterdam would cost $5.19, or about 26.90 francs.

I have compiled in the following table the freight rates, per ton, from seaports to Switzerland, based on carloads of 10 metric tons each, f. o. b. cars, and delivered at depot at Berne.

	Francs.	United States equivalent.
F. o. b. Rotterdam, all rail	25.20	$4.863
Same, via Rhine to Mannheim, then rail	19.90	3.684
F. o. b. Antwerp, all rail	23.10	4.458
F. o. b. Havre, all rail	24.60	4.747
F. o. b. Genoa, all rail	24.50	4.728

At these prices and at the present freight rate to Rotterdam and via the Rhine, a ton of American coal would cost to land at Berne about 46 francs ($9.07).

On further inquiry, I find that the average price of the German coal as given in the statistics, viz, 28 francs ($5.40), is too low, for the reason that the import includes a great quantity of dust, which is sold at a lower price than the regular coal, and this, according to competent authority, raises the average price to about 30 francs ($5.79) per ton.

The freight on coal from the Saar district to Berne is computed to be 14 francs ($2.70) per metric ton, so the Saar coal delivered here would be 30 plus 14, or 44 francs ($8.49) per ton, against the American article at 46 francs ($8.89). The freight on the French coal is 12 francs ($2.32); Belgian, 20 ($3.86); Cardiff, 20 ($3.86), and from the German Ruhr districts, also, 20 francs ($3.86) per metric ton.

According to newspaper reports, the Paris-Lyons Railroad has made a contract in Philadelphia for the delivery of 75,000 tons of A1 coal at $2.05 per ton. While the Coal Trade Journal of New York seems to be skeptical as to this, I am in a position to affirm the truth of a concluded contract, but whether it is for 75,000 tons I am unable to state. The fact remains that 500 tons of soft coal were shipped from Philadelphia for Holland on the Dutch steamer *Prince* at the end of March.

With American coal at $2 or $2.10 per ton, f. o. b. port, and with the disappearance of the present unfavorable freight conditions, I can see no reason why Switzerland should not be supplied from the United States. With the cost of $1.15 per ton at the pit's mouth for soft coal, a $2 rate is no improbability, and, if assured, American coal could be sold at the same price as the German Saar coal.

Interested parties here have asked me if it would be possible to load a steamer with one-half bituminous and one-half anthracite coal, and I have told them that it could be done, and these parties are ready and anxious to open up trade with the United States.

I am at the service of any firms who wish to gain the Swiss coal trade, and shall be glad to put them in communication with buyers.

ADOLPH L. FRANKENTHAL,
Consul.

BERNE, *May 3, 1900.*

GENEVA.

I believe the time propitious for the introduction of American coal into French Switzerland, if the conditions which I shall outline below can be complied with.

The consular district of Geneva consists of the cantons or States of Geneva, Vaud, and Valais, with a combined population of 468,000. Geneva is the only really important city in the district, and it is to Geneva that American exporters must look for establishing agencies. To begin with, it may be stated that all the coal used here is imported. Four-fifths of it comes from France, the remainder from Germany. A very little has been imported recently from Great Britain. There is no importation of American coal of any sort.

Although it is impossible to secure cantonal statistics on the subject, it is roughly estimated that 300,000 tons (long tons, i. e., 2,200 weight) of coal and coke are consumed yearly in this consular district. In the city and canton of Geneva, to which territory I consider it best to confine this report for the sake of accuracy, about 100,000 tons of coal and coke are used annually. Of this, 35,000 tons are gas coke furnished by the Geneva Gas Company. The gas company buys the "mine run" at the mines of St. Etienne in France and elsewhere, and imports it for its own use at a cost in the Geneva Railway station of about $6.27 to $6.35 a ton. This coal is of three or four different sorts:

(1) The so-called "tout-venant," which means the "mine run," of which 30 per cent is lump coal, the remainder dust.

(2) Coal so sifted or screened as to produce little nut coals of from three-quarters to one inch and a half thick.

(3) "Menus fins fins," or the very smallest variety of nut coal. This coal must produce only 4 to 8 per cent ashes and from 28 to 35 per cent volatile matter.

The gas coke produced and sold by the Geneva Gas Company is, as above stated, about 35,000 tons annually, of which the retail price is from $8 to $9 a ton.

Steam coal.—About 40,000 tons of steam coal and coke are used annually in the city and canton of Geneva. I am sending samples which will doubtless interest the trade.[1] Coal is of two principal varieties:

(1) The so-called "fat coal" (sample No. 1) from the south of France, coming principally from the mines of Alais in the department of the Gard. This is a fine lump coal which burns a short flame and is free from sulphur.

(2) The coal of "la Sarre" or "Sarrebrück," coming from Sarrebrück, Germany (sample No. 2). This coal burns a long bluish flame, is rich in caloric properties, and is regarded here as the perfection of steam coal. It comes in large blocks and in small lumps about the size of a man's fist. In this connection, it should be stated that all steam coal for this market must be free from dust and trash. It should also contain a very small percentage of sulphur, as sulphur is believed here, whether reasonably or not, to destroy the boilers.

(3) Coal bricks from the coal mines of St. Etienne, France, in the department of the Loire (sample No. 3). These bricks are made of coal dust mixed with tar and oil, and come in large and small sizes. They are much used by railways and steamboats. The average is about the same thickness, but not quite as long as an ordinary building brick in the United States. Some of them, however, are very large, as much in bulk as three building bricks. Steam coal of the three above-described varieties costs at present on the cars in the Geneva Railway station from $7.14 to $7.72 a ton. The coal above referred to would appear to be something between our cannel coal and anthracite, but this by no means correctly classifies it. Exporters should try to see the samples which I am sending and judge from them. Some of this coal also comes from the French mines of Blanzy and Montceau.

Foundry coke.—This is a large, hard, 48-hour coke (of the Connellsville variety) that comes from St. Etienne and Alais, France (sample 4), and to a small extent from Germany. It must be a pure coke and must not produce more than 7 per cent ashes. It is used almost exclusively by the steam tramways of Geneva. The local supply at present is not up to the demand, and the cost has steadily gone up during recent months, until the present price on board the cars in the Geneva railway station is from $10.65 to $12.06 a ton.

Stove and grate coal.—About 13,000 tons of anthracite and 5,000 tons of so-called "coal bullets" are used annually in the city and Canton of Geneva for domestic purposes. The anthracite, which is most in demand, is of the variety known here as "demi-dur," or half hard (sample No. 5). It comes from Alais, Department of the Gard, France, and is considered "irreproachable" as a domestic coal. It must leave not more than 8 per cent ashes and 14 per cent volatile matter. The price of this coal on board cars in the Geneva railway station is at present from $7.72 to $8.78 a ton. The so-called coal bullets above referred to are also much in use for domestic purposes (sample No. 6). They are egg shaped and are about the size of a bantam egg. They are made of a mixture of the dust of soft anthracite and pitch tar, and are molded into the egg shapes above referred to. These bullets come exclusively from the Department of the Loire, in France. Their price on board car in the Geneva railway station is from $7.14 to $7.52 a ton.

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[1] Filed for reference in Bureau of Foreign Commerce, where they can be examined by interested parties.

Gas coke, as above stated, is also greatly used for domestic purposes. Hard coke is also used to some extent for domestic purposes (sample No. 7). Its price on board car in the Geneva railway station is from $9.26 to $12.06 a ton. As already stated, the figures above given are exclusively for the city and Canton of Geneva. The city of Lausanne and the Canton of Vaud consume probably 125,000 tons of coal a year and the Canton of Valais possibly 50,000 tons. If American coal can be introduced profitably into Geneva, the agents here would speedily find a market for it not only in the Cantons of Vaud and Valais, but in all the rest of French Switzerland. As to the question of the best means of introducing our coal, I am advised by the leading dealers that in order to obtain a foothold for it here, the first condition would be that it be sold at the outset at slightly lower figures than European coal (prices on board car in the Geneva railway station). It must also conform in quality as nearly as possible to the continental coal above described. As to the best means of putting American coal down here, I am convinced that it would be by sea to Marseilles, France, thence by rail to Geneva, a haul of about 300 miles. The current freight rate from Marseilles to Geneva is 12 francs ($2.31) a ton. To this should be added 8 cents a ton for "handling en route" and for custom-house duties, the latter being 3.9 cents a ton. Thus it would cost for transportation, custom-house duties, and other charges, $2.39 a ton from Marseilles to Geneva. What it would cost to land the coal at Marseilles can better be ascertained in the United States than here.

American exporters who think this market worth their attention are advised to communicate at once with Messrs. Empeyta & Co., No. 5 Place street, Gervais, Geneva. These are the most enterprising coal importers here and are ready to enter at once into negotiations with the United States, if the conditions above outlined can be complied with. Coal is steadily advancing in this market, and it is not likely that there will be a fall in prices for two or three years. Any correspondence with Messrs. Empeyta & Co. should, if possible, be in French; if this is not practical, exporters may write them in English through this consulate, and I would be glad to translate the letters for them or to do anything else that might serve to promote American interests in this district. I may add that Messrs. Empeyta & Co. are the sole concessionaires of the Geneva Gas Company for all the gas coke produced by that institution. They would be disposed to accept American coal agencies for all of Switzerland, and in that event would undertake, if necessary, to establish a great coal yard in Marseilles for the purpose of rehandling from there, although they would naturally prefer to transport the coal directly from the ships to Geneva without rehandling in Marseilles. This would depend upon such possible concessions as the Paris, Lyons and Marseilles Railroad Company might be disposed to make, if the coal were handled in large quantities. At present, only 10-ton cars are in use on the French railroads, and at this particular moment there is a scarcity even of these on the Paris, Lyons and Marseilles, which is the only line from Marseilles to Geneva; but if negotiations were opened with Empeyta & Co. the question of transportation from Marseilles would doubtless be quickly solved by that enterprising firm. On the map, it would seem that coal might be as easily transported from Genoa to Geneva as from Marseilles; but, as a matter of fact, the rate is not only considerably higher, but the facilities on the Italian roads are nothing like so good. Nor would it be practicable to bring the coal here from a German seaport.

Besides Messrs. Empeyta & Co. the following firms also import coal direct from the mines to Geneva: John Gignoux, No. 6, Rue des Boucheries; A. Descours, No. 40, Rue de Lausanne; Cogne & Co., No. 5, Rue Amat; H. Chevallier, No. 3, Rue Musy; Ph. Cuchet, No. 26, Chemin Vert; A. Stoudmann, No. 26, Rue des Vollandes; J. Gudet, No. 45, Rue des Pâquis; F. Vuagnat, No. 4, Boulevard des Philosophes, all of Geneva.

BENJ. H. RIDGELY, *Consul.*

GENEVA, *April 6, 1900.*

ST. GALL.

Upon receipt of the circular letter of the Department of State concerning "Foreign markets for American coal," I telephoned a gentleman who is supposed to be the best posted person concerning the coal conditions and requirements of Switzerland, and asked him if he could inform me if American coal could be successfully imported into this country. His reply was: "I have just received instructions from the railroad authorities to make a thorough investigation as to the possibility of importing American coal. What information can you give me on the subject?"

This is only one of a score of genuine demands for American coal in Switzerland. The prime question is: "Can the American coal exporters profitably supply it?"

If those engaged in the American coal export trade had informed the consular officers of the United States upon the following important points, I would have been in position to tell the railroad authorities and others just what they desire to know about this subject:

First. How much per ton, in quantities ranging from 100 to 2,000 tons, will good anthracite cost, delivered at the docks in Antwerp or Rotterdam, which are the best seaports at which to enter coal bound for Switzerland?

Second. How much per ton will be charged for a good quality of soft coal, and how much for coke? Low-grade coal or coke would not find a market for a second shipment.

Coal dealers here are thoroughly informed concerning transportation rates to Switzerland from Antwerp and Rotterdam; therefore, with the above definite information from the American dealers, they would be able to calculate exactly what American coal and coke would cost per ton, landed anywhere in the Swiss Republic. All industrial centers in coal-importing countries are becoming very much alarmed at the startling increase in prices and a prospective coal famine in Europe. This has "opened the door" for American coal of good quality in Switzerland, which has hitherto been an almost impossible market, and if it can be landed at the two ports mentioned at prices that will enable it to compete with German coal of the same quality, a considerable market will be found.

The coal dealers are now charging $12 a ton for a fair quality of hard coal, and it costs consumers who purchase by the carload between $7 and $8 per ton, delivered at St. Gall.

There is no duty on coal. There is a custom-house control tax of 39 cents for every carload of 10 tons.

During 1900, Switzerland will consume about 1,800,000 tons of coal, and at the rate of $8 per ton (if the prices continue high) the total cost will amount to $14,400,000, which must be paid to foreign dealers, as Switzerland produces no coal worth mentioning. This is a market worth looking after. The amount almost equals the total annual Swiss exportations to the United States. No American coal, so far as I can ascertain, is now used in Switzerland.

JAMES T. DUBOIS,
Consul-General.

ST. GALL, *April 5, 1900.*

EUROPEAN COAL SUPPLY.

During the past ten years, there has been a marked increase in the industrial enterprise of Switzerland, and also in the railroad facilities of the country. Every year Switzerland finds her demand for coal increasing, and every year industries, railroads, and other coal consumers find themselves approaching a condition where the supply will not equal the demand at prices that are at all satisfactory. Switzerland has no coal mines worth mentioning. The total product of such mines as may be found in the Jura region would scarcely furnish motive power for the small steamers that traverse the lake at Interlaken during the year, and this coal is of indifferent quality. Thus this industrious and energetic little country is dependent upon foreign countries for her coal supply, which may amount to a little over one and a half millions of tons during this year, with prospects of a considerable increase in the future. The question, therefore, is puzzling the Swiss as to where their coal supply is to come from, not only for this year but for the years that are to follow. There is coal enough in the world to supply all demands up to the dawn of the fortieth century, so the geologists say, and they are saying a great deal about it just now, owing to the industrial activity, the consequent increase in demand for coal, and the recent strikes in the mining regions.

The German geologists claim that Germany has the largest coal deposits of any country in the world, with the exception of North America and China. Recent drillings near Erkelenz, and also north of the Weser, have developed an extraordinary addition to the known coal fields of Germany. It is now contended that there is a well-defined connection between the coal fields to the left and right of the Rhine. It is also believed that the Aix-la-Chapelle coal deposits extend, at accessible depths, over the whole country from the Aix district to the north of Dusseldorf, and that the Westphalian coal fields run farther north than was formerly calculated. It is asserted that the Aix coal fields can not, in the ordinary process of development, be exhausted until the twenty-eighth century, and in the Saar district the supply will last probably until the thirtieth century. But in German Silesia are deposits of still greater magnitude. A few years since these deposits were estimated at 45,000,000,000 of tons (metric tons, 2204.6 pounds), but geologists have recently increased this estimate to 90,000,000,000 of tons, and they claim that this represents the minimum amount. They argue that the deposits in upper Silesia alone are greater than those of Great Britain, and that the entire Silesian supply can not be exhausted during the next two thousand years. In France and Belgium, the coal fields are supposed to be completely defined, and will not be enlarged by future developments. The coal supply of North America is estimated at 673,000,000,000 tons, and the hard-coal supply of China 630,000,000,000 tons, with about the same amount of soft-coal deposit.

At the beginning of last year, hard coal delivered at St. Gall cost from $5.60 to $6 a ton, per carload. To-day the price is a little above $8 per ton and the supply is short. If 1,600,000 tons are consumed in Switzerland in 1900, the consumers will have paid over $3,250,000 more for coal than the amount would have cost one year ago, this being an advance of about 30 per cent.

The fear is growing that Germany, in the interest of the German industries, railroads, and other coal consumers may, owing to the scarcity of coal, impose restrictions on the exportation from that country, and if this should happen no land would suffer in proportion so much as Switzerland, because her annual importation of coal and coke from Germany amounts to over two-thirds of her total consumption of that product.

It is now proposed to organize a Swiss coal and coke importing syndicate, which shall obtain coal lands in Spain and Austria, in order to operate them especially to supply the Swiss demand. Another proposition is that the Swiss Government, for military purposes, and the railroads and industrial establishments, for their own use, should arrange to store from year to year sufficient quantities of coal within the Swiss territory to enable the interested parties to fully meet any emergencies that may arise, and thus liberate themselves from the dangerous condition of almost absolute dependence upon Germany for the bulk of their supply.

Owing to the difficulty in mining Spanish coal, and securing proper transportation for it after it is mined, this source is believed to be a doubtful one. The Austrian coal has not thus far been very successfully imported into Switzerland, and has not given much satisfaction. English coal in small quantities has been delivered and sold in the southern part of Switzerland, at prices which have competed with the German coal. America has not yet furnished any coal for the Swiss market. The problem for our coal exporters to solve is this: Can they deliver a good grade of coal and coke at the industrial centers of Switzerland at prices that will enable them to compete with the Germon, English, French, and Austrian products? With coal costing the small consumer 64 francs ($12.35) per ton, it would seem probable that American coal could be exported to Switzerland at a fair profit, if the business is taken promptly and properly in hand.

JAMES T. DUBOIS,
Consul-General.

ST. GALL, *April 9, 1900.*

TURKEY.

All coal sold in this market is English, i. e., Cardiff, Newcastle, Sunderland, etc., about 200,000 tons being annually consumed, prices varying from 21 to 29s. ($5.11 to $7.05) c. i. f. Constantinople, according to the rise and fall in freights. Recently, there has been a marked advance on the foregoing figures, and Cardiff now retails at 43 to 44 s.

($10.46 to $10.71). The scarcity of coal is, I believe, due in part to the war in South Africa and in part to the considerable increase in European consumption.

With regard to American coal, there is a widespread impression that it has not the same steam-producing power as the Cardiff, and would-be purchasers are unwilling to contract for coal which might not come up to the required standard.

If American exporters could guarantee their coal as giving the same results as the Cardiff, I have no doubt that considerable shipments would soon be made. I have been for some time negotiating with representatives of the railways entering this city, with the view of inducing them to give American coal a trial, and as a result two large samples of soft coal were shipped from New York on the 10th of March, and are expected here this week.

There are large coal deposits at Zoungouldak, a port on the Black Sea about 115 miles east of the Bosphorous, but the quality is very poor and it can not find a market except for emergencies. Considerable quantities of this coal are now sent to Smyrna, Alexandria, Greece, and elsewhere. Dust is also sent to Trieste and Marseilles. When the new quay works at Zoungouldak are finished, 600 tons of coal per hour can be loaded on each steamer. The owners of these mines hope the quality will improve as the shafts go deeper.

The duty on coals is 8 per cent ad valorem, and 1 per cent when brought here and reshipped.

CHAS. M. DICKINSON,
Consul-General.

CONSTANTINOPLE, *May 2, 1900.*

UNITED KINGDOM.

BRADFORD.

If at any time in the history of modern industry, so far as it relates to the Bradford consular district, it has been true that "coal is king," that time is certainly the present. It would perhaps be an exaggeration to describe the existing situation as a coal famine, but it certainly is not wide of the mark to say that there is still a remarkable shortage, and coal producers have plenty of work to meet all demands. No clearer definition of the actual situation of affairs as they exist in this large and important consular district could be given than the language employed quite recently by the president of the Halifax Chamber of Commerce, which forms an important trade center of the worsted industry of Bradford. In his annual address to that body on January 24, 1900, he said: "The year just closed was one of the most extraordinary ever witnessed. The output of the United States is larger than that of the United Kingdom, and coal can be bought in America at the pit mouth at 4s. 9d. ($1.15) per ton, as against 5s. 10½d. ($1.42) paid in Great Britain. The result of this is that people in Lancashire are talking about bringing coal from America."

Since last December, merchants in this district have had a most difficult task to supply the needs of their customers. The pressure to-day is not as severe as it has been during the past three months, still there is an excellent demand at very high prices. At one time, coal for steam-raising purposes was so scarce that house coal had to be used to keep factories going, and as high as 17s. 9d. ($4.31) per ton was paid at the depots, while to that price must be added 1s. (24 cents) per ton as cartage, this rate being charged when delivery is made within a radius of 1½ miles.

As to the question whether American coal is being imported into this district, all the best authorities are agreed that it has not as yet found its way here—in fact, it has never been seen, though they see no reason (if both bituminous and anthracite are found on analysis to be as good as are produced by the large coal pits situated some 20 to 30 miles distant from Bradford, and it can be landed here to come in as cheap as Yorkshire coal) why a large amount can not be sold and a good trade regularly transacted. As showing the extent of the coal trade of Bradford, the total consumption per annum by Bradford mills alone is estimated at 1,800,000 tons. This all goes for steam-raising purposes, and when the outside towns and villages in this consular district are included, it may fairly be estimated that something like 3,000,000 tons are consumed yearly. For household purposes, 80,000 tons per annum are consumed by Bradford householders, while, reckoning on the same basis as before, this amount may reasonably be doubled.

In determining how far American coal on analysis compares with that from the pits supplying the West Riding of Yorkshire, I am able to give the testing results arrived at by the best firm of dyers in Bradford, which they alone have officially made. These results relate to bituminous coal, which is used only throughout this district, and refer to three leading qualities largely consumed by the mills of Bradford:

Analysis of leading lines of coal.

WOOLEY NUTS.

Gallons per hour	1,322.5
Hundredweights per hour	13.125
Pounds of water per pound of coal from and at 212° F	8.907
Ash	8.09

SHARLSTON NUTS.

Gallons per hour	1,625
Hundredweights per hour	14.62
Pounds of water per pound of coal	10.18
Ash	5.98

SILKSTONE.

Gallons per hour	762.5
Hundredweights per hour	7.65
Pounds of water per pound of coal	10.16
Ash	3.85

Below is given also the official analysis of two other leading lines of coal from two of the best pits in Yorkshire. In this instance, the reports are made, not by Bradford users but by public officials:

Report on the analysis of a sample of the Denby Main and Cadeby Main washed singles nuts.

This sample was black and bright; burnt freely, with much flame. Ash, brown. Specific gravity, 1.290. One cubic foot weighs 80.4 pounds.

[Sample dried at 100° C.]

	Per cent.
Carbon	80.11
Hydrogen	5.13
Oxygen and nitrogen	11.76
Sulphur	.89
Ash	2.21
	100.00
Coke	63.7
Calorific value (Thompson's calorimeter)	14.3

This is a very good, clean coal, contains very small amount of ash, and is high in carbon and calorific value.

I may add that I have determined the ash in 27 samples of these nuts during the last twelve months, and the average ash is 2.204 per cent, the figures varying very little during this period. I consider this an excellent coal for engine purposes or for gas making.

Commercial analysis of Hoyland Silkstone gas coal.

Specific gravity of coal (water as 1)		1.27
Weight of a cubic foot	pounds..	79.375
Sulphur in coal	per cent..	.79
Purified gas per ton of coal	cubic feet..	11,525
Gas per cubic foot of coal	do....	407.5
Illuminating power of gas consumed in London standard argand, in sperm candles		18.79
Value of 1 cubic foot in grains of sperm		450.96
Weight of illuminating matter in pounds of sperm		742.47
Weight of coke, per ton of coal	pounds..	1,477
Percentage of coke in coal		65.937
Fixed carbon in coke	per cent..	95.75
Ash in coke	do....	4.25
Weight of sulphur, per ton of coal	pounds..	19.936

Calorific value of coal equal to the evaporation of 14.63 pounds of water from 212° by the combustion of 1 pound of coal.

The subject of kinds and qualities consumed in this district will be of special interest to American coal producers.

First, as to those qualities mostly used by factories, etc., and for steam-raising purposes generally. Rough engine coal screened, rough unscreened, screened and unscreened nuts, small slack, and smudge are mostly consumed, though smudge is used for brick-burning purposes, for which there are several kilns just on the outskirts of the city. All this comes from the pits situated in the South and West Riding of Yorkshire, particularly the latter. For household purposes, the leading line of coal is "Haigh Moor" best and seconds, which is a very good, hard, bright burning coal, giving plenty of heat and little ash. Next comes the "Wallsend" seam coal, which is also largely consumed. In the city ironworks and for iron smelting purposes, the hardest of the seam is mostly used, and this compares favorably with the anthracite which comes from South Yorkshire and Wales, but on account of the heavy railway freight, very little finds its way to Bradford.

On the question of current prices, I have made special inquiries, and the following list may be taken as reliable.

In regard to coal for household purposes, the following prices are strictly wholesale at the Bradford depots. If the retail price is required, 3s. (73 cents) per ton extra for carriage and the middleman's profit must be added.

Current wholesale prices in Bradford.

[Household coals, bituminous.]

Description.	Per ton.		
	English value.		United States equivalent.
Featherstone Wallsend:	*s.*	*d.*	
Best	20	5	$4.96
Seconds	19	5	4.72
Haigh Moor:			
Best	19	3	4.68
Seconds	17	6	4.25
Cobbles, Haigh Moor, and Silkstone	17	0	4.13
Large house nuts	16	8	4.05

The following price list is the one current to consumers direct, and represents to-day what mills are actually paying for coal delivered at their own door.

Current prices for steam coal, delivered.

Description.	Per ton.		
	English value.		United States equivalent.
	s.	*d.*	
Double screened nuts	14	6	$3.52
Rough slack	13	8	3.32
Screened rough engine coal	14	9	3.58
Rough unscreened	13	9	3.34
Small slack	10	8	2.59¼
Smudge, for brick-burning purposes	11	0	2.67

From the South and West Riding of Yorkshire coal fields, large quantities of fuel are exported, chiefly to the Continent. There is no doubt that the principal cause of this coal scarcity is the refusal of the colliers to work more assiduously and longer hours, they having recently received a sensible increase in wages. Then, too, all trades have been and continue to be exceptionally busy, and for once at least consumption has overtaken and outstripped supply. Looking at this subject in its broadest aspects, there is no doubt that an important trade in American coal can be done with this district, providing it can be put down at the Bradford railway depots at as low a price as that produced in the neighborhood, and also providing its burning and heating qualities are on a par with the coal obtained from the West Riding coal beds.

As coal is not imported, there are no transportation rates current for its conveyance from the seaboard to this center. It would, however, be possible for intending shippers to arrange with some of the steamship companies for a through rate from the United States to Bradford, via Liverpool or Hull by rail, or via Hull or Goole by canal. One of the largest dealers in coal in Bradford is Messrs. Jabez Cole & Co. (also a branch of the Bradford Coal Merchants' and Consumers' Association, Limited), with whom any parties wishing to do business with this district might communicate.

ERASTUS S. DAY, *Consul.*

BRADFORD, *April 27, 1900.*

BRISTOL.

The consular district of Bristol presents no interest in connection with the Department inquiry. Its own coal fields and the adjacent fields of South Wales supply all local requirements, and will continue to do so, under any conceivable conditions that may arise. Nor is it more than a nominal exporter of coal, Bristol and Gloucester contributing last year only 4,200 tons to the 41 million tons exported from the United Kingdom.

LORIN A. LATHROP, *Consul.*

BRISTOL, *June 15, 1900.*

FALMOUTH.

I am not aware that any American coal has been used in Cornwall.

The prospect of importing seems to depend largely on price and quality. There would be no customs duties. Very little smokeless Welsh coal is imported, but the tin mines use a fair amount of semibituminous Welsh, while the clay works use semibituminous and bituminous. Some use all large, and others take a certain percentage—perhaps 50 per cent—of small.

Prices for these are exceptionally high, and run at present from about $3.77 to $4.38 per ton, free on board at the shipping ports; freights are $1.03 to $1.21. Other industries in Cornwall take various qualities of Welsh.

Concerning coals for household use, etc., very little Welsh is now imported, the main supply coming from Lancashire. These coals are now about $3.65 to $4.01 per ton, free on board at the shipping ports.

There are only two or three ports in Cornwall which can accommodate vessels of 500 tons burden.

The nearest coal mines are those of South Wales, and most of the tin mines get their coals landed at the ports on the north coast of Cornwall which are in close proximity to Wales.

HOWARD FOX, *Consul.*

FALMOUTH, *April 26, 1900.*

LIVERPOOL.

The coal trade in the Liverpool district has improved during the last twelve months beyond the expectations of the colliery proprietors. It was thought at the end of June, 1899, that the demand had reached its highest point, the result being that many buyers refused to contract for a year's requirement at the prices asked, preferring to buy as required in the hope that prices would decrease. But owing to the Transvaal war and the increasing prosperity of the iron, steel, and kindred industries, the prices of coal have steadily increased, and are now higher all round than they have been for nearly thirty years.

There is practically no coal imported into Liverpool. Occasionally, however, small lots of American or Australian (cannel coal), for gas making, and occasionally also small lots of American anthracite, are received.

There are no publications issued giving the total consumption of coal for this or any other district in England, so far as I can learn, and I have been unable to get any reliable estimate of the local consumption. The coals mostly in demand are household, gas, and steam coal, especially the latter, the present prices of which are as follows: Household coals, from 12s. 6d. ($3.04) to 16s. 6d. ($4.01) per ton, according to quality, at the pit mouth; gas coals, 13s. ($3.16) to 15s. ($3.65) per ton, according to quality, at the pit mouth; steam coals, 12s. ($2.92) to 15s. 6d. ($3.77) per ton, according to quality, at the pit mouth; slack, 10s. ($2.42) to 11s. 6d. ($2.79) per ton, according to quality, at the pit mouth.

The retail price of household coal in Liverpool is from 20s. ($4.86) to 25s. ($6.07) per ton.

The sources of the Liverpool coal supply are chiefly Wigan, St. Helen's, and other parts of the Lancashire coal fields. There are smaller quantities received from North Wales, Staffordshire, and Yorkshire.

The coal mines of Wigan, St. Helen's, and other Lancashire towns are in the Liverpool consular district, and, as already explained, are the chief source of the Liverpool supply.

Coal is very largely exported from this port, but during the year 1899, as compared with 1898, there was a decrease in the amount exported of about 50 per cent, the figures being as follows:

	Tons.
1898	823,267
1899	426,079

This large decrease in exports of coal from this port is accounted for by the large influx of extra orders in 1898 because of the colliers' strike in South Wales. The exports, however, of coal from the United Kingdom during 1899 increased by 6,121,870 tons, compared with 1898, the figures being 41,180,300 tons for 1899 and 35,058,430 tons for 1898, the largest quantity of which went to European ports, including those on the Mediterranean. From an official report of the British Government, it appears that the annual export of the country in 1869 increased in every direction except one, viz, Northern and Central America, where there was a falling off to the extent of 157,000 tons.

The export prices of coals, which increased very considerably during the year 1899, were as follows: For the first quarter of the year, steam coals were put free on board at Liverpool at from 9s. 6d. ($2.31) to 10s. 6d. ($2.55) per ton, and special qualities at 11s. ($2.67); and these prices continued until the end of June. From July to September, the prices were 10s. ($2.43) to 11s. ($2.67), and special qualities 11s. 6d. ($2.79.) During November, the prices were 11s. ($2.67) to 12s. ($2.92), and 13s. ($3.16) for best qualities; and in December the prices again increased to 12s. ($2.92) to 13s. ($3.16), and 14s. ($3.40) for best qualities. For the first and second quarters of 1899, gas coals were 10s. 6d. ($2.55) to 11s. ($2.67) per ton, free on board, Liverpool. During the third quarter of 1899, the price was 11s. ($2.67) to 11s. 6d. ($2.79) per ton, free on board, Liverpool; and the fourth quarter 12s. ($2.92) to 13s. ($3.16) per ton, free on board, Liverpool. The price of household coal exported during 1899 was about 1s. (24 cents) to 1s. 6d. (36 cents) per ton more than that of steam coal. Since the beginning of this year, prices all round have again advanced considerably, and the minimum now for steam coals is about 16s. ($3.89) per ton, free on board, Liverpool. The quantity of coal shipped at Liverpool for ships' use on foreign voyages during the years 1898 and 1899 was as follows:

	Tons.
1898	2,458,318
1899	2,433,558

There is no scarcity of coal supply in this district. The present demand, however, for steam coal and slack is, if anything, in excess of supply and the stocks have been greatly reduced. For other qualities of coal, the supply and demand are about equal. In 1870, the British Government appointed a royal commission to investigate the coal industry of this country, and it was estimated that at that date the amount of coal available in the country was 146,489,000,000 tons, which, it was calculated, would last for 1,273 years. Since then, however, scientific authorities have set the limit at periods varying from fifty to two hundred and fifty years; but as new coal districts are being discovered, the matter of the period until exhaustion will be reached is now generally considered to be a very speculative one.

JAMES BOYLE, *Consul.*

LIVERPOOL, *May 4, 1900.*

MANCHESTER.

There is little or no demand for imported coal in this district, all classes of coal being largely used here and the mines being situated close to the city.

A pressing demand for all descriptions of fuel continues throughout this district, and collieries are generally short of supplies to meet the immediate requirements of their customers. Most of the leading ones are in arrears with their deliveries, and in many cases are compelled to buy from other districts to keep up supplies.

The prices for house-fire descriptions consequently remain very strong at the full list rates of 14s. 6d. ($3.53) to 15s. 6d. ($3.77) per ton for best house coal, and 13s. ($3.16) to 14s. ($3.41) for seconds at the pit mouth.

The market with regard to other descriptions of fuel is also as steady, an advance of 6s. ($1.46) per ton upon steam and forge coal contracts for the next twelve months having been agreed to, which will bring average prices up to about 14s. ($3.41) at the pit.

On engine classes of fuel, it has been decided that 10s. 6d. ($2.55) per ton is the minimum quotation for slack at the pit mouth.

One of the largest coal companies in this district informs me it can not give the probable duration of the scarcity.

There is no American coal used here. Manchester being an interior port, and fully supplied with coal from collieries in the vicinity, imported coal could not be put on the market at a price to compete with that of local companies who have little or no freight charges.

WILLIAM F. GRINNELL, *Consul.*

MANCHESTER, *May 1, 1900.*

Consul Grinnell sends from Manchester, April 20, 1900, extract from the London Times of the 19th, as follows:

THE COAL FAMINE AND THE PUBLIC.

Next to a famine in food, which can hardly happen in a country like England, a famine in fuel—which recent experience has shown to be perfectly possible—is one of the most serious troubles that can afflict civilized humanity. In some respects, indeed, a coal famine is much worse than a food famine, for without coal it would be practically impossible to keep our mills, forges, mines, and factories in operation, to maintain our systems of transportation by sea and land, to provide heat and light for a hundred different requirements, or to discharge many other functions that are now rendered so easy as to seem commonplace and matters of course.

A coal famine, in the absolute and unqualified sense of the term, is as unlikely, and perhaps as impossible, as an absolute food famine. Supplies of coal will always be available, just as we may always expect to command supplies of food. But the word famine has both a relative and an absolute meaning, and we are relatively coming near to the stage of famine when coal has become so scarce that those who require large supplies have much difficulty in procuring them, when the widely ramified branches of national industry suffer consequent loss and inconvenience, and when the cost of fuel has been forced up to a point that compels the ordinary citizen to be parsimonious in its use. Such a stage of relative scarcity and dearness has been reached within the last few months, and the curious and unique feature of the business is that it has been reached almost simultaneously in many different countries. England in this respect is neither worse nor better off than Germany, France, Belgium, Russia, Austria, Spain, and other European countries, while even the United States, which has hardly ever before known what it is to be without cheap and abundant supplies of fuel, is now, from this point of view, more or less sharing in the universal complaint that coal is relatively scarce and dear.

Having at one time or another visited and examined the principal coal fields of the United States, Germany, France, Belgium, Bohemia, and Hungary, as well as those of the United Kingdom, and having given to the economic conditions of the coal industry a large amount of my attention for more than a quarter of a century, I have naturally been struck by the very exceptional character of the recent and existing situation in the coal industry. The most prominent feature of that situation is the world-wide demand for increased supplies, and the consequent efforts that are being made in all coal-producing countries alike to bring the supplies abreast of the extraordinary demand. No country on the face of the earth is now in possession of as cheap supplies of fuel as formerly. In the great majority of cases, the last twelve months have witnessed advances of price ranging from 10 to 100 per cent; but whether it be China, Japan, Australasia, Continental Europe, North America, or Great Britain, higher values for fuel have everywhere prevailed.

The proximate causes of the recent scarcity and present high cost of fuel all over the world are, in my opinion, the following:

1. The increase in the make of iron and steel, which has increased the consumption of fuel within the three years ended with 1899 by probably quite 40,000,000 tons.

2. The increased requirements of the world's railways, which within the same period have had to face an enormous increase of business, involving a corresponding increase of coal consumption.

3. The growth of the world's mercantile marine, responding to the increase of commercial operations, which probably represents an increase of 15 to 20 per cent on any former period, and a similarly larger demand for coal.

4. The almost unequaled prosperity of all manufacturing industries, and the demands thereby entailed on coal-producing nations.

5. The more general diffusion of wealth, and the greater prosperity of whole communities, which have led to a larger consumption of coal for domestic and other purposes.

A very perfunctory examination of this analysis of causes is sufficient to show that they are of world-wide application, although no doubt in some countries they will be much more generally active than in others. One of the oldest writers on the principles of political economy has written that all the world, as to trade, is like a single nation. If this remark applies with special emphasis to any particular trade, it must be the trade in coal, for British coal is now supplied to the extent of over 50,000,000 tons a year to almost every country in the world, and any rise of cost at the pit or increase in the rates of freight is at once felt by the remotest markets. If it be true that misery likes company, then the coal consumers at home may derive satisfaction from the knowledge that the burden of dearer fuel has equally to be borne, with perhaps less apparent chance of relief, by all other consumers, even in the remotest corners of the earth.

But the threatened coal famine has another unique feature in following as it does a period of the greatest expansion of mineral, and especially of coal, resources that has ever been known. The extent of this expansion may be estimated from the following comparison:

Quantities of coal raised in the principal coal-producing countries in 1869 and in 1899.

[1=1,000 tons.]

Country.	1869.	1899.[1]
United Kingdom	102,948	220,000
United States	28,258	205,000
Germany[2]	25,704	130,000
France[2]	13,330	35,000
Belgium	12,298	24,000
Austria[2]	8,600	15,000
Russia	510	13,500
Colonies and India	750	15,000
Japan and other countries	500	6,000
Total	187,898	663,500

[1] The figures for 1899 are mostly estimated, but within very narrow margins of error, taking the world's output as a whole.

[2] The figures recorded for these countries include considerable quantities of lignite and brown coal.

Within the same period, the consumption of petroleum and natural gas for calorific uses has made corresponding progress, equal approximately to an addition of at least another 50,000,000 or 60,000,000 tons to the annual fuel resources of the world.

From this table it appears that during the thirty years ended 1899, the fuel (coal) output of the world increased by 475,000,000 tons, or 252 per cent. The curious thing is that despite the enormous advance, the demand for coal in 1899 was greater and the apparent danger of a coal famine more real than at any former period, excepting in the years 1873–74. Let us further see to what this enormous increase in the world's consumption of coal is mainly due.

In the first place, as already stated, there can be little doubt that it is attributable to the increased demands of the world's industrial operations, and more especially of the iron industry. Since 1869, the world's output of pig iron has risen from about 10,000,000 to over 40,000,000 tons. This alone would mean an increased consumption of coal, as coal, to the extent of between 45,000,000 and 50,000,000 tons. But in working up this pig iron into manufactures—rails, plates, structural iron and steel, wire, cutlery, tools, and implements and machinery—probably a further 100,000,000 tons of fuel would be consumed, so that over 30 per cent of the total increase is directly attributable to the iron trade and collateral industries.

In the next place, as we have seen, transportation in its various forms is responsible for a great part of the increase. The shipping trade of Great Britain alone absorbs nearly 20,000,000 tons of fuel annually. That of the world at large will probably consume three times that quantity, and after due allowance has been made for the improvements which have enabled steamers to be worked with quite one-half of their former consumption of coal, the vast increase in the relative proportion of steam tonnage, and in the work done by that tonnage, will in all probability have called for nearly twice the quantity of fuel consumed by the mercantile marine of thirty years ago. In other words, if the world's coal consumption under this head is now 60,000,000 tons a year, this is likely to be 30,000,000 tons more than the quantity consumed in 1869. We know definitely that in the case of the United Kingdom, the increased consumption in the interval has exceeded 100 per cent.

The coal consumption on railways is a very large and increasing item. On the 25,000 miles of line constructed in Great Britain, the annual coal consumption is now computed at about 10,000,000 tons. There are at present over 465,000 miles of railways in operation throughout the world, and if they are assumed to average the ascertained British consumption of fuel, the total consumption of coal in railway operations would be something like 180,000,000 tons a year. From this figure, however, very large deductions have to be made in respect of lines with little traffic and lines that burn other sorts of fuel, such as wood and petroleum; so that, on the whole, the railway consumption of coal fuel will probably be quite 50,000,000 tons, under the figure obtained by adopting British practice as a basis. Even so, however, the total coal consumed on the world's railways would come out at 130,000,000 tons, and of this quantity probably one-half has been added during the period under review.

We have now accounted for 245,000,000 tons, or over 50 per cent of the total increase in the world's consumption of coal during the last thirty years. As with the iron industry, so with general manufactures. As with steam shipping and railways, so with domestic requirements, the gas industry, naval needs, and the many other elements that make up the sum total of the uses of fuel. During these thirty years the world's population has increased enormously—probably to the extent of quite 200,000,000—and this alone would represent a vast coal consumption, if the general home consumption of coal-using countries be taken at even one-fourth the British standard, which is 3.8 tons per head per annum.

When one examines the main causes of the increase of coal consumption in the past, it is at once apparent that the phenomena producing the results in question are of a more or less permanent character. Hence the increase in the consumption of coal is likely to continue in the future, although whether in a diminishing or in an accelerated ratio no one can with confidence predict. Railways will continue to be built, commerce will continue to extend, iron and steel—the handmaidens of material civilization—will be produced in larger quantities, population will continue to grow all over the world, and the demand for more coal will follow.

We may now proceed, with advantage, to discuss the special circumstances of the coal trade situation, so far as the United Kingdom is concerned. That situation has a number of distinguishing and characteristic features. Perhaps the most prominent of these is the enormous extent of our export trade, which is more than three times as great as that of Germany, the next most important coal-exporting nation, and fifteen times as much as that of the United States, which is the next largest coal-producing nation after our own. Another distinguishing feature of the British coal industry is that our supplies are in many directions threatened with relatively near exhaustion. In Lanarkshire—the most important of the coal fields of Scotland and the one of all others on which the great manufacturing industry of Glasgow mainly depends—in South Staffordshire, in the Forest of Dean, in some parts of Durham and Northumberland, and elsewhere, the available supplies of coal are being so rapidly depleted that more or less serious exhaustion will have to be faced within the next twenty, and in some cases—as in that of the cheap coal of Lanarkshire—within the next ten years. To this subject I propose to return by and by.

What is the very lowest figure at which coal can be worked and sold in the United Kingdom? The home office records show that within the last twelve years the average estimated value of the total British coal output was only 5s. ($1.21) per ton, while the average official value of the coal output of Scotland was only 3s. 11d. (95 cents) per ton. This latter figure compares not unfavorably with the low-selling prices recorded for the United States, and is decidedly under the average prices hitherto recorded for any country in continental Europe. But it is not by any means certain that the coal extracted from the mines of Great Britain was produced for these prices, even if these were the averaged selling quotations. It has happened again and again that large quantities of coal have been produced in British coal fields over long periods with no profit at all, and even at a loss.

This process, of course, could not go on for an indefinite period. Indeed, the exceptionally low figures of 1888 were improved to the extent of about 1s. 3d. (30 cents) per ton in the following year, so that probably on an average of the two years the results were not entirely unsatisfactory. But about this time we began to hear a good deal of the theory of the "living wage," and this movement brought about an advance in the cost of labor which has continued ever since, and is likely to be more or less permanent. Throughout the federated districts of Yorkshire, Lancashire, Derbyshire, etc., the wages paid have since 1889 been from 30 to 45 per cent higher than those paid in 1888; and until, and unless, we resumed the rates of wages paid in that year, the production of coal at equally low rates would be practically impossible. Indeed, no one appears to anticipate that the general range of coal prices in the United Kingdom will ever again be so low as they have been. Cheap coal is not a function of low wages alone. It depends also on other conditions, such as comparatively virgin mines, shallow depths, thick and easily worked seams, and other features that are becoming less and less prominent, and in some parts of Great Britain are entirely disappearing.

The average increase of value in the coal trade of Great Britain over the year 1899 is difficult to compute. In some descriptions of coal, it has been much more considerable than in others. It has perhaps been greatest of all, strangely enough, in what are ordinarily regarded as the most worthless varieties, namely, smudge or "duff," which in some previous years have been sold at 1s. per ton, or even less, but which within the last few months have sold in large quantities for 5s. to 6s. 6d. ($1.21–$1.56) per ton, according to the locality and the purposes to which it was to be applied. A very good test of the difference of value is that supplied by the coal export returns. If we go back to the four years ended 1888, we find that the average declared value of our coal exports in that period was only 8s. 5d. ($1.84) per ton. In the four years ended 1898, the average was about 9s. 3d. ($2.24) per ton. But for the last six months the average declared value of our coal exports was not less than 13s. 6d. ($3.27) per ton, which is an advance of 4s. 3d. ($1.02) on the average value of the corresponding exports for the four years ended in 1898. We believe that, so far as our coal export trade is concerned, this is about an adequate and accurate measure of the true difference between then and now; but that difference has not up to the present time prevailed for a longer period than about six months, and if we go back to this time last year, before the very decided rise of values began, we find that the coal exports are returned by the board of trade at an average value of less than 11s. ($2.67) per ton.

But the export coal values, after all, apply to only some 60,000,000 tons at the most, including coke and the coal shipped for steamers in the foreign trade. If the two last-named items are deducted, the export values apply to less than 50,000,000 tons, out of a total computed output of about 220,000,000. There would therefore remain 170,000,000 tons to be dealt with as representing home consumption, or, rather, home consumption plus foreign shipping. This remainder is divisible into coking, manufacturing, household, gas, and steam fuel. In regard to all descriptions alike there has been a material rise of values, though not to the same extent. Coking coal has perhaps felt the impulse of heavy demands more than any other description, primarily because of the revival of our iron and kindred industries, but also because there has been unusual pressure on the part of foreign buyers, especially France and Germany. The usual price of coke at the ovens in Durham over a series of years has been about 9s. ($2.18) per ton. For a considerable part of last year, and up to the present time, the value of good coke at the ovens has been 22s. to 25s. ($5.34–$6.07) per ton. So far as household coal is concerned the average value in the London market for the four years ended 1897 was 15s. 2d. ($3.68) per ton, while the corresponding average since midsummer of 1899 has been about 22s. per ton. At the greatest center of the steam-coal trade—namely, Cardiff—the average official price of that variety of fuel, f. o. b. for the two years ended 1897 was 9s. 7½d. ($2.33) per ton, whereas for some months past the best qualities of that fuel have been quoted at 20s. to 23s. ($4.86–$5.58) per ton, and some sales have been recorded as high as 26s. ($6.31). Manufacturing coal, as the owners of iron, steel, shipbuilding, engineering, and other works know to their cost, has gone up fully 4s. to 6s. ($0.97–$1.45) per ton, according to locality and description, while gas coal, of which the supply is far from unlimited, has followed a similar movement. On the whole, therefore, we are not likely to be far wrong in estimating that for the eight months ended the 1st of March this year, there has been an advance of 5s. to 6s. per ton all round in the realized value of coal where supplies were free for sale, as in view of the previous upward movement they would generally be, so that coal owners should have had a difference of fully 5s. ($1.21) per ton to dispose of over and above the profits realized previously.

The man in the street is likely to find some difficulty in adequately realizing the fact that this difference of 5s. per ton would mean, on the estimated coal output of 1899, a total sum of £55,000,000 ($267,650,000), assuming that it had prevailed over the whole of that year. As, however, it only prevailed over a part of the year, and as the material rise of prices did not take effect till after midsummer, it is probable that the total increase of values for 1899 would not mean more than 4s. per ton or £44,000,000 ($214,126,000) in all. A sufficient indication of the relative magnitude of this amount is furnished in the fact that even the smaller computation of increase is a larger sum by £5,000,000 ($24,332,500) than the total official value of our coal output so recently as 1887. For the last ten years, the recorded average value of our total coal output at the pit's mouth has fluctuated between 5s. 6d. and 7s. ($1.21, $1.45, $1.70) per ton. If the average for 1899 be taken at 10s. ($2.43) per ton, which is a highly conservative figure, the total value of the British coal output of 1899 will be about £110,000,000 ($535,315,000), or about 180 per cent more than the recorded total value of 1887.

These vast figures suggest some notable and interesting problems. One of the more obvious is the equitable distribution of the great increase of profits—or, to put it more exactly, of selling price—realized in 1899, and to be realized in the current year. In the first place, it will not be overlooked that such a boom in the coal trade is almost a unique experience, and that no similarly prosperous period has been known since 1873–74, although no doubt in 1880, and again in 1889, coal owners enjoyed a comparatively good time. Speaking generally, the coal trade is subject, more than most other industries, to prolonged periods of apparently irremovable depression, and such a period lasted with hardly any amelioration from 1891 to 1898. During that time, coal owners for the most part were in the depths of despair. Another similar period of pronounced depression extended from 1884 to 1888. During this latter term the average price of coal at the pit's mouth in Scotland was about 4s. (97 cents) per ton, against 10s. to 11s. ($2.43-$2.67) per ton at the present time. It is manifest then, that if coal owners could not look forward to occasional periods of spurt and boom, most of them would throw up the game, as many of them threatened to do not so long ago. A single year of good prices in the coal trade has more than once had to compensate for many weary and anxious years of bad prices and difficult profits.

Whatever then may be the share of the increased price that is falling to the coal owners, it must not be overlooked that it has to recoup them for many years of previous bad trade, but when the increased burdens laid on the coal trade, as the results of recent legislation, and the higher cost of working all round, are taken into account, I do not believe that the increase of profits is so great as is commonly supposed. In this view, I am confirmed by the lately published reports of coal companies.

So far as the miners are concerned it would appear that they have had a reasonable, if not a sufficient, share of the increased value realized for coal over the last fifteen months. Most of them have had their wages advanced by successive increments until they now stand at 15 per cent to 30 per cent above the level of a year ago. The average increased wages of the miners has been put by Mr. Pickard, M. P., at about 8d. (16 cents) per ton; but it is well known that, in addition to general or district advances, there have been local or colliery advances, often extended to considerable localities, which would, if combined and averaged, bring up the total general increase of earnings to quite 1s. (24 cents) per ton. This, spread over the total coal output of the United Kingdom in 1899, would mean a gross increase on the year 1898 of about 11,000,000 sterling ($53,531,500) in the item of wages alone—or, if the average output per employee is taken at 300 tons a year, it would mean an individual increase for the year of £15 ($72).

It was inevitable that the prospect of large profits should tempt coal owners and capitalists to adopt energetic measures to bring about an increase of coal production. From the various projects of this character that have come to my knowledge, including not only the opening out of new collieries but the reopening of old ones and the sinkings made to other seams in existing pits, I am of opinion that within the last fifteen months, provision has been made for adding quite 20,000,000 tons a year to the coal output of the United Kingdom; and, if the same average annual output per employee as that of the period 1894-97 is assumed, the increased resources of production will probably be considerably more.

The throwing of this large additional volume of coal on the market is likely to convert the present relative scarcity into an absolute glut. The question is, when? On this point one can not profess to be any wiser than the man in the street. No one knows what the coal miners may do, and they are virtually the masters of the situation. If they work steadily and take only an average number of holidays, we may look for greater abundance as a proximate event. If they adopt organized restriction, as they did in 1873-74, and have several times done since, they may succeed in keeping up prices for a considerable time to come. In these matters the attitude of labor—which is generally the dark horse—counts for much. But in any event, no relief worth speaking of is to be expected from foreign countries. We have already seen that their position is quite as strained and as parlous as our own.

It was recently suggested in Parliament that another royal commission should be appointed to inquire into the extent and duration of our coal supplies. Thirty years have now passed since the Argyll commission reported on this subject. In the interval, nearly 5,000,000,000 tons of our then existing coal supplies have been used up. In many other respects the conditions have changed. Some of our most important fields are rapidly nearing a period of permanently dearer cost of working, which will seriously prejudice the general economic outlook of manufactures and commerce. Our most keen and successful industrial rivals have greatly cheapened their coal supplies, notably Germany and the United States. There is an uneasy feeling on the whole subject throughout the country. Parliament appointed a select committee to inquire into the coal famine of 1873. The indifference shown by the Government to the coal crisis of the present time is difficult to understand.

NEWCASTLE-ON-TYNE.

There is no demand in this consular district for imported coal, this being the center of the great Northumberland and Durham coal fields, the mines of which supply all the local demands and also export largely.

The following are the quantities of coal, including coal for ships' use (in tons of 2,240 pounds), exported from the Tyne during the year 1899:

Germany	1,507,154
Belgium and Holland	511,383
France	826,705
Russia	950,677
Italy and Malta	1,598,175
Spain and Gibraltar	631,822
Portugal	193,488
Norway	244,480
Sweden	380,373
Denmark and Iceland	312,422
Austria, Turkey, and Greece	186,504
Algeria, Egypt, and other African ports	235,596
United States of America	321,093
British America	65,232
South America	227,220
East Indies, China, and Japan	37,885
West Indies	7,921
Australia	4,912
Coastwise	5,303,051
Total	13,546,093

From all quarters the demand for coal is extraordinarily pressing, and prices, high as they already are, show signs of advancing.

Prices here are: Best steam coals, $4.50 to $4.62 per ton, f. o. b.; steam smalls, from $2.92 to $3.04; gas coals are difficult to buy, and best qualities are realizing $4.26 to $4.38 a ton; bunker coals are scarce and firm, even the poorest qualities bringing $3.95 to $4.14 a ton; best household coals are $5.36 and $5.60 a ton.

The present rates of freight are:

Tyne to—	
London	$0.91
Havre	$1.06– 1.09
Marseilles	2.49
Genoa	2.43– 2.49
Cronstadt	1.76– 1.79
Stockholm	1.43

There are no tariff or other restrictions upon importations of coal into this country.

HORACE W. METCALF, *Consul.*

NEWCASTLE, *April 25, 1900.*

NOTTINGHAM.

The three counties of this consular district—Nottinghamshire, Derbyshire, and Leicestershire—produce a large surplus of an excellent quality of bituminous coal. The output in tons for 1898—the latest completed statistics—was as follows: Nottinghamshire, 7,775,134; Derbyshire, 13,664,502; Leicestershire, 1,796,946. The present output will show a considerable increase per county, in about the same proportions. Some 70 per cent of this product is used outside the district, chiefly for railway and steamship purposes, considerable being exported to the Continent. No anthracite is produced, but the best quality, "main" coal or "steam" or "locomotive hard," ranks with the best-known soft coal. The older mines in the district reach levels of about 800 feet, from which the best coal comes. While the developed mines are not inexhaustible, they are practically so for several generations, and the present extraordinary demand has stimulated prospecting, with the result that new veins in old territory and new mines in new territory are being discovered and developed. If, however, the increased output surpasses that of last year by 10 per cent, it will exceed the estimate of the best mining men with whom I have talked. Perhaps, the best idea of the Midlands coal situation can be gained from the following summary of an interview with the superintendent of a leading colliery here (the Clifton). He said, substantially:

> I can not see the end of our workings. We have more coals in sight to-day than five years ago. This is practically true of the district. Of course, the phenomenal increase of price has considerable to do with both output and development work. As to prices, two years ago we were glad to enter into contract with large consumers of our main coal for a pit-mouth price of 7s. 3d. ($1.76). Later, for contracts expiring this year, we quoted 9s. 6d. ($2.31). We are now filling contracts which exhaust our capacity and which I wish we were rid of, and if you wanted to make a large contract for 1901, the best rate I could quote would be 14s. ($3.40), and I should not care to quote that now. Of course, the extraordinary demand, both locally, because of the war and great industrial activity, and from the Continent, accounts in a measure for the rise, but there are other and elemental reasons. It costs more to get the coal out. Within one year, for instance, the increase granted in miners' wages throughout the federation (which includes all territory excepting Scotland, Northumberland, Durham, and South Wales) amounts to 15 per cent. Wages in collateral branches of labor have increased in proportion. Everything which enters into the cost of coals at the pit mouth has increased enormously in price. There will be no reduction of price for the best steam coals for at least another year. Household coals, prepared for local consumptiom, may and perhaps will decrease from 2 to 4 shillings during the dull summer season when such stocks pile up in the vicinity of the mines, but I can see no reason to anticipate anything but increased prices for steam coals of the best quality. The continental demand is enormous. From here we ship largely

through Grimsby and Hull. I have never heard of any American coals being brought in here for any purpose. It would be as preposterous as carrying coals to Newcastle, but still, if our prices keep going up, and American coals can stand comparison with ours for the most exacting steam purposes, I don't see why you shouldn't find a market even in England at the prices I see quoted.

This seems to express the idea pretty well. More as a matter of curiosity than anything else, I applied to the Midland Railway Company for a coal rate from Liverpool or Hull to Nottingham, both about equally distant and the chief ports for freight entry. After some explanation a quotation of 6s. 9d. ($1.64) per ton by carload lots was secured. From this I was assured no rebate of any character, whatever the quantity shipped, could, under English law, be granted. The traffic manager was also careful to state that this rate simply covered the haul; that, while he would run his wagons or cars on the wharf alongside the vessel and deliver the coals in yard here, no incidental expense of whatever character was included. Since then, moreover, all the railway lines have issued notice that an arbitrary charge of 3d. (6 cents) per ton will be made for the use of wagons (cars); also a further charge of 1d. (2 cents) at the various wharves for weighing each vehicle—work hitherto done gratuitously. The explanation made for these charges is that the railroads must recoup themselves for the enhanced prices of the coal consumed by themselves, an item, for instance, amounting last year to £40,000 ($194,660) in the case of the Great Northern Railway alone.

For the information of coal men, who will appreciate and understand the local terms used, the following comparison is given of wholesale prices at pit mouth in the three shires mentioned, reduced to American money:

Description.	1899.	1900.
Leicestershire:		
Main coal	$2.43	$3.40-3.65
Spires	2.19	3.52
Main cobbles	2.19	3.40
Screened cobbles	1.94	3.16
Nuts	1.58	2.92
Rough slack	1.21	2.31
Dust slack	.48	1.70
Derbyshire:		
Main coal	2.92	4.38
Cobbles	1.82	3.40
Slack	.97	2.55
Dust	.60	1.70
Nottinghamshire:		
Steam hard	2.43	3.40
Small steam	1.21	1.94
Domestic coals (best)	2.92	3.89

Supplementary to the above, the following published articles will be of interest:

[From London Financial Times, April 11.]

When it is suggested that the high prices which have ruled for coal during the past few months have been brought about by the formation of a "ring," emphatic denials follow as a matter of course. We are told, however, that a meeting was held at the St. Pancras Hotel on Monday, at which quotations were fixed for the rest of the year. Those who disbelieve the existence of a ring will still decline, we suppose, to be convinced, but we fear that householders will find from their coal bills that the combination is a very real thing.

[From London Commercial Intelligence, March 24.]

The Warwickshire, Leicestershire, and Derbyshire collieries have since Thursday made a decrease in their charges of from 1s. to 2s. per ton for house coal. Prices of steam coal and slack remain firm, the demand being almost as keen as ever for that class of fuel. The decrease will, of course, in a measure, affect the private consumer in Birmingham, but not in a very large degree, as most of the supply for Birmingham comes from the Cannock Chase district, where they have not budged. More decreases may be expected shortly, though as yet from Cannock orders are not delivered under a fortnight's notice.

[From Yorkshire Telegraph, April 12.]

The Kronstadt Vostnik, St. Petersburg, announces that the Russian Government has ordered 200,000 tons of the best smokeless coal at Cardiff. This coal is to be delivered at Odessa free of freight at 31s. ($7.53) per ton, and of that amount 11s. ($2.67) per ton will be paid for freight.

S. C. McFarland, *Consul.*

Nottingham, *April 24, 1900.*

SUPPLEMENTARY.

Supplementary to my report of date April 24, in relation to the coal production of the English Midlands, the accompanying table, supplied by the Iron and Coal Trades Review, a private publication obtainable only by trade subscribers, gives the best current statistical information regarding coal interests in the United Kingdom as a whole. Regarding the coal reserves in British mines, the following article, contributed to the same publication by Mr. W. H. Chambers, president of the Midland Institute of Mining, Civil, and Mechanical Engineers, is of especial interest:

Referring to the letter addressed by Mr. Provand, M. P., to the Right Hon. A. J. Balfour, M. P., asking for the appointment of a royal commission to inquire into the probable duration of the British coal field and the disposal of the coal, I fail to perceive that any useful purpose would be served by the inquiry. Mr. Provand himself alludes to the very erroneous conclusions arrived at by a similar committee, whose report was founded upon investigations made in the years 1866 to 1871.

To show the value of these inquiries, there is at the present time more coal available for working than the commission believed to exist at the time their report was made, which is proved by borings and sinkings over the last twenty years. Taking the Yorkshire coal fields as an example, the continuation of the coal seams at a workable depth has been proved by the boring to extend to some 12 miles east of any colliery now working in the district.

This shows, as I mentioned last June at the meeting of the Midland Institute of Mining, Civil, and Mechanical Engineers, of which I am president, the existence of an area of coal, in addition to that available to present collieries, which will produce upward of 10,000,000,000,000 tons, capable of maintaining the present output of Yorkshire for more than four hundred years.

It is, however, well known that coal fields lie in basins, and these borings are probably near the bottom of the basin. This must be so unless the coal suddenly ceases in the center of the earth, which has never been known in the history of mining, so that unless nature has departed from her hitherto invariable course, there must necessarily be some 40 to 50 miles of coal seams rising to the east, in addition to the area absolutely proved, upon which I have based my calculations.

An export duty on coal would certainly result, in ordinary times, in the closing of many collieries and the locking up of our resources of mineral wealth and general prosperity. Miners would be thrown out of work, and would necessarily emigrate to new coal fields in foreign countries, which are even now being only too quickly opened up to meet the world's demands. If England must eventually become an agricultural country, why should it be necessary to precipitate that condition? There always were, and always will be, some people who would reduce the nation to the condition of mind which caused the wealthy miser to starve himself to death for fear he might die in the workhouse.

S. C. McFARLAND, *Consul.*

NOTTINGHAM, *May 4, 1900.*

British coal production, prices, wages, and exports.

PRODUCTION OF COAL IN UNITED KINGDOM.

	1888.	1889.	1890.	1891.	1892.	1893.
Total coal production..tons..	169,935,219	176,916,724	181,614,288	185,479,126	181,786,871	164,325,795
Computed total value........	£42,971,000	£56,175,000	£74,954,000	£74,100,000	£66,050,000	£55,810,000
	$209,118,372	$273,371,638	$364,763,641	$360,607,650	$321,432,325	$271,599.365
Number of persons employed	510,741	542,828	590,011	626,568	647,409	640,662
Coal produced per person employed............tons..	353	326	308	296	281	256
England:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Cheshire..................	637,402	620,101	677,656	675,941	666,773	567,042
Cumberland..............	1,745,954	1,739,491	1,740,413	1,669,756	1,424,749	1,815,552
Derbyshire................	9,409,592	10,093,222	10,455,974	11,039,536	11,141,152	7,882,779
Durham..................	29,664,892	30,307,177	30,265,241	29,807,523	23,834,027	30,819,070
Gloucestershire..........	1,257,340	1,359,814	1,419,616	1,360,259	1,226,933	1,098,885
Lancashire................	21,176,371	21,707,867	22,123,522	22,722,618	22,356,171	15,909,195
Leicester..................	1,196,951	1,336,574	1,455,910	1,528,589	1,500,235	1,203,961
Monmouth................	6,830,781	6,751,308	6,895,410	7,159,187	7,407,604	7,309,207
Northumberland..........	8,001,828	8,794,006	9,446,035	9,330,859	9,528,834	9,112,788
Notts......................	5,929,666	6,582,582	6,861,976	7,221,047	7,159,750	5,328,838
Shropshire................	766,629	710,490	693,146	692,235	642,588	636,628
Somerset..................	983,078	876,254	921,870	915,170	855,690	575,469
Staffordshire............	13,528,820	13,937,406	13,773,629	14,325,267	14,132,827	13,011,768
Warwickshire............	1,559,031	1,700,490	1,744.174	1,779,979	1,786,830	1,535,994
Worcestershire...........	989,496	893,880	923,531	940,138	867,708	921,241
Yorkshire................	20,579,960	21,976,027	22,338,886	22,794,057	23,189,915	15,955,817
Wales:						
Glamorganshire..........	19,594,503	20,297,004	21,426,415	21,761,801	22,808,314	21,835,431
Carmarthen..............	648,572	710,977	762,032	725,238	696,903	726,865
Denbigh..................	2,061,488	2,180,316	2,221,497	2,295,619	2,095,644	1,384,889
Flintshire................	679,265	715,183	754,149	856,625	864,517	821,426
Brecon and Pembroke...	281,392	304,946	331,168	346,584	294,539	283,236
Scotland:						
Lanarkshire..............	13,049,386	13.159,704	13,584,770	14,093,360	15,252,977	13,926,446
Fifeshire..................	2,459,395	2,761,616	3,121,646	3,301,000	3,573,818	3,619,530
Ayrshire..................	3,039,804	3,120,362	3,159,727	3,385,977	3,579,216	3,325,934
Stirlingshire..............	1,270,722	1,377,802	1,498,085	1,606,360	1,745,226	1,635,595
Linlithgowshire..........	663,944	775,440	782,645	856,132	778,576	731,410
Edinburghshire..........	767,311	860,840	868,878	883,906	928,721	872,630
Ireland....................	91,904	103,201	102,267	105,681	111,881	105,678

British coal production, prices, wages, and exports—Continued.

PRODUCTION OF COAL IN UNITED KINGDOM—Continued.

	1894.	1895.	1896.	1897.	1898.	1899.
Total coal production..tons..	188, 277, 525	189, 661, 362	195, 369, 060	202, 129, 931	202, 054, 516	220, 085, 303
Computed total value.......	£62, 730, 000 $305, 275, 545	£57, 231, 000 $378, 514, 662	£57, 190, 000 $278, 315, 135	£59, 740, 000 $290, 724, 710	£64, 169, 382 $312, 280, 298	....
Number of persons employed	693, 090	687, 371	678, 690	681, 530	693, 661	729, 009
Coal produced per person employed............tons..	272	276	288	297	297	301
England:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Cheshire	781, 637	749, 656	775, 405	738, 494	706, 506	721, 431
Cumberland	2, 058, 867	1, 883, 592	1, 931, 771	1, 986, 536	2, 061, 878	2, 100, 418
Derbyshire...............	11, 472, 579	11, 295, 786	11, 774, 639	12, 648, 419	13, 573, 754	14, 594, 424
Durham...................	32, 556, 924	31, 133, 253	32, 762, 539	33, 819, 068	34, 737, 347	34, 870, 675
Gloucestershire	1, 219, 837	1, 263, 080	1, 233, 933	1, 321, 513	1, 587, 789	1, 528, 014
Lancashire...............	23, 125, 983	22, 014, 515	22, 610, 885	22, 812, 422	24, 324, 610	24, 387, 475
Leicester................	1, 499, 730	1, 467, 262	1, 517, 229	1, 626, 555	1, 735, 643	1, 888, 819
Monmouth.................	8, 213, 156	7, 914, 539	8, 841, 379	9, 307, 304	6, 059, 509	10, 103, 067
Northumberland...........	9, 541, 199	8, 694, 651	9, 027, 752	9, 768, 459	10, 570, 713	11, 184, 072
Notts....................	6, 821, 830	6, 564, 859	6, 623, 529	6, 970, 424	7, 770, 047	8, 224, 441
Shropshire	683, 025	698, 128	720, 130	703, 251	751, 651	766, 219
Somerset	835. 826	841, 491	871, 373	860, 002	990, 787	983, 973
Staffordshire	13, 230, 238	12, 534, 192	13, 066, 665	13, 441, 410	13, 720, 413	13, 881, 220
Warwickshire.............	1, 950, 519	2, 165, 410	2, 430, 770	2, 552, 120	2, 688, 283	2, 873, 098
Worcestershire...........	888, 646	728, 141	852, 743	867, 093	395, 071	842, 951
Yorkshire................	23, 446, 184	22, 811, 038	23, 943, 488	24, 053, 020	25, 636, 367	26, 904, 465
Wales:						
Glamorganshire	23, 993, 594	23, 759, 663	23, 630, 411	25, 112, 551	19, 140, 742	28, 116, 941
Carmarthen..............	888, 521	1, 014, 609	1, 042, 668	1, 005, 613	1, 123, 898	1, 207, 205
Denbigh	2, 355, 347	2, 206, 993	2, 233, 365	2, 259, 597	2, 473, 896	2, 512, 104
Flintshire...............	795, 418	641, 079	659, 674	665, 365	720, 500	682, 630
Brecon and Pembroke...	323, 073	351, 303	353, 463	380, 922	399, 469	442, 884
Scotland:						
Lanarkshire	12, 216, 260	15, 922, 772	15, 805, 301	15, 822, 297	16, 142, 580	16, 416, 754
Fifeshire................	2, 784, 019	3, 911, 235	3, 633, 455	4, 077, 818	4, 447, 569	4, 927, 489
Ayrshire	2, 590, 430	3, 667, 201	3, 565, 729	3, 585, 427	3, 753, 674	3, 809, 313
Stirlingshire	1, 421, 882	1, 903, 278	1, 986, 139	2, 143, 286	2, 260, 058	2, 269, 992
Linlithgowshire	630, 680	866, 539	882, 961	896, 942	910, 331	948, 748
Edinburghshire..........	720, 681	1, 076, 621	1, 076, 956	1, 144, 511	1, 244, 747	1, 267, 521
Ireland	112, 604	125, 586	129, 585	135, 025	129, 965	125, 355

PRICES AND WAGES.

[Reduced to United States currency.]

	1888.	**1889.**	**1890.**	**1891.**	**1892.**	**1893.**
Prices.						
Average value at pit's mouth:						
England	**$1.24**	**$1.53**	**$1.97**	**$1.73**	**$1.78**	**$1.48**
Wales	**1.44**	**1.73**	**2.53**	**2.51**	**1.97**	**1.90**
Scotland	**.76**	**1.27**	**1.49**	**1.58**	**1.44**	**1.44**
Average export prices	**2.05**	**2.48**	**3.02**	**2.96**	**2.69**	**2.41**
Average prices in London market.....................	**3.43**	**4.02**	**4.35**	**4.45**	**4.31**	**4.62**
Newcastle-on-Tyne, f. o. b	**1.70**	**2.04**	**2.80**	**2.53**	**2.31**	**2.02**
Hull, f. o. b	**2.21**	**2.22**	**2.92**	**2.72**	**2.77**	**2.70**
Glasgow, f. o. b	**1.43**	**2.17**	**2.63**	**2.51**	**2.38**	**2.31**
Wages.						
Percentages above or below standard:	***Per cent.***	***Per cent.***	***Per cent.***	***Per cent.***	***Per cent.***	***Per cent.***
Northumberland.........	**7½**	**10**	**31**	**30**	**20**	**20**
Durham..................	**3¾**	**25**	**30**	**35**	**25**	**25**
Federated districts.......	**10**	**20**	**40**	**40**	**40**	**40**
South Wales and Monmouthshire	**7¼**	**25**	**52½**	**53¾**	**22½**	**20**
Fife and Clackmannanshire	**5**	**37½**	**50**	**50**	**25**	**37½**
West Scotland	**8¾**	**50**	**50**	**50**	**25**	**50**

British coal production, prices, wages, and exports—Continued.

PRICES AND WAGES—Continued.

	1894.	1895.	1896.	1897.	1898.	1899.
Prices.						
Average value at pit's mouth:						
England	$1.63	$0.24	$1.24	$1.24	$1.56	....
Wales	1.85	1.75	1.68	1.68	1.48	....
Scotland	1.46	1.31	1.24	1.29	1.48	....
Average export prices	2.55	2.27	2.15	2.18	2.41	....
Average price in London market	3.99	3.58	3.53	3.75	3.94	....
Newcastle-on-Tyne, f. o. b	2.12	1.92	1.75	1.80	2.02	....
Hull, f. o. b	2.70	2.48	2.21	2.38	2.65	....
Glasgow, f. o. b	2.26	1.85	1.70	1.82	2.26	....
Wages.						
Percentages above or below standard:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Northumberland	17½	7½	3¾	6¼	18¾	25
Durham	25	15	15	17½	25	33¾
Federated districts	30	30	30	30	32½	40
South Wales and Monmouthshire	21¼	12½	10	11¼	20	30
Fife and Clackmannanshire	25	12½	(1)	12½	42½	53¾
West Scotland	25	12½	12½	12½	50	56¼

[1] Standard.

EXPORTS OF COAL, CINDERS, AND PATENT FUEL.

	1888.	1889.	1890.	1891.	1892.	1893.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Total exports of coal	25,632,000	27,504,000	28,738,000	29,496,000	29,048,000	27,708,000
Total exports of coke	798,000	769,000	732,000	860,000	609,000	603,000
Total exports of patent fuel	540,000	682,000	672,000	728,000	796,000	721,000
Total coal shipped for steamers in foreign trade	7,121,000	7,737,000	8,096,000	8,536,000	8,600,000	8,126,000
To foreign countries.						
Russia:						
Northern ports	1,285,891	1,520,018	1,338,784	1,375,138	1,457,412	1,583,733
Southern ports	271,183	286,308	154,405	127,381	42,680	76,135
Sweden	1,303,343	1,520,545	1,546,621	1,598,541	1,601,017	1,599,805
Norway	678,632	760,810	768,166	840,543	892,770	849,808
Denmark	1,324,840	1,380,733	1,352,596	1,437,488	1,479,560	1,451,042
Danish West India islands	19,976	16,605	19,912	11,998	13,099	8,841
Germany	3,066,557	3,474,556	3,350,713	4,173,993	3,719,143	3,720,581
Holland	295,598	501,362	527,563	776,487	464,021	854,158
Dutch possessions:						
Java	77,376	59,818	102,009	118,283	113,718	90,760
Indian seas	27,414	15,841	22,880	45,046	16,675	14,897
Dutch Guiana	5,042	4,652	4,227	8,649	5,654	3,886
Belgium	241,195	276,920	598,281	607,779	432,928	251,192
France	4,193,185	4,036,920	5,098,250	5,258,346	5,286,278	4,709,050
Algeria	139,680	198,971	196,554	210,934	290,371	302,654
Portugal	413,863	452,921	530,985	537,106	497,032	436,146
The Azores	19,950	28,776	32,075	26,860	46,589	44,324
Madeira	67,916	83,149	64,469	60,866	70,553	55,482
West Africa	228,948	396,934	313,508	155,503	179,570	155,004
Spain	1,422,038	1,508,956	1,599,837	1,676,839	1,665,932	1,578,832
Canary Islands	199,692	250,948	304,346	305,911	301,432	309,416
Fernando Po	2,232	1,445	1,405	403	726	425
Philippine and Ladrone islands[1]	2,129	5,891	9,235	9,590	6,392	6,985
Spanish West India islands[1]	99,493	90,278	68,447	56,750	46,647	46,614
Italy	3,471,741	3,621,143	3,912,209	3,551,881	3,760,219	3,793,484
Austrian territories	78,028	91,145	113,078	113,713	131,154	165,275
Greece	223,802	219,555	249,010	243,631	259,315	191,711
Bulgaria	1,441	1,486	1,999	3,903	3,225	3,606
Roumania	183,979	152,078	195,875	263,764	274,671	316,885
European Turkey	366,097	378,518	357,128	315,143	345,935	315,690

[1] These countries are tabulated as though they still belonged to Spain, for the sake of uniformity.

British coal production, prices, wages, and exports—Continued.

EXPORTS OF COAL, CINDERS, AND PATENT FUEL—Continued.

	1888.	1889.	1890.	1891.	1892.	1893.
To foreign countries—Cont'd.						
Asiatic countries:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Asiatic Turkey	66,500	68,355	71,163	78,642	98,433	83,778
Egypt	1,428,719	1,465,653	1,539,890	1,578,036	1,577,436	1,432,998
Tripoli and Tunis	13,712	16,167	20,687	18,353	19,865	13,676
Madagascar	305	5	1,491	1,290	....	1,032
Siam	1,810	924	1,033	1,522	737	1,156
Cochin China, Cambodia, Tonkin China	18,974	10,998	7,839	8,948	9,789	18,442
China (including Hongkong and Macao)	15,214	32,305	32,655	36,107	20,255	10,315
Japan	9,108	7,104	31,439	13,010	11,564	23,586
Islands in the Pacific (except Fiji)	5,378	2,596	2,011	4,411	2,877	3,052
Haiti and Santo Domingo	....	6,672	4,996	5,280	3,060	1,843
North and South America:						
United States	199,440	80,755	152,016	339,417	227,483	213,842
Mexico	55,218	52,628	68,111	105,277	124,088	119,139
New Granada (United States of Colombia)	67,095	6,158	5,329	2,232	3,257	8,923
Venezuela	21,179	25,908	28,787	32,657	25,188	27,531
Peru	180,398	61,498	67,055	48,028	58,049	43,922
Bolivia	17,012	....	....	....	....	....
Chile	262,831	177,831	356,748	329,499	237,915	273,518
Brazil	590,216	722,339	660,535	798,322	826,313	756,603
Uruguay	291,064	478,834	274,960	228,461	192,324	231,739
Argentine Republic	466,855	766,782	567,254	421,483	656,768	651,195
To British possessions.						
Dominion of Canada	92,759	78,796	40,239	53,296	60,412	72,194
British Newfoundland and coast of Labrador	14,843	8,903	13,077	16,991	23,915	24,678
Channel Islands, Guernsey, Jersey, etc	104,405	99,014	109,403	109,566	126,429	107,492
Gibraltar	492,954	539,944	496,441	406,996	316,915	288,758
Malta and Gozo	573,017	606,355	575,155	420,594	363,272	348,169
Gambia and Sierra Leone	8,645	11,250	16,230	16,457	16,006	21,813
St. Helena	1,620	2,116	1,861	780	1,684	1,429
Cape of Good Hope	181,197	322,374	253,516	255,496	265,447	218,385
Mauritius	42,351	39,663	50,662	31,951	32,889	38,879
Aden	231,580	233,642	198,582	186,012	161,203	160,100
British India (exclusive of Straits Settlements and Ceylon)	848,562	681,688	703,340	714,588	717,265	615,063
Bombay and Scinde	704,435	592,440	631,616	636,538	617,587	530,700
Madras	33,668	35,259	41,820	34,979	51,745	63,297
Bengal and Burma	110,459	53,989	29,904	43,071	47,933	20,066
Straits Settlements	274,807	251,273	232,642	205,518	203,799	155,736
Ceylon	284,844	288,065	292,406	312,577	275,076	257,070
Hongkong	9,712	30,267	26,523	25,194	16,229	9,434
South Australia[1]	34,466	40,220	61,973	93,873	57,602	43,227
Bermuda	9,553	10,650	7,864	5,095	6,119	9,363
British West India islands	123,226	143,464	126,892	121,561	126,732	119,336
British Guiana	66,911	91,615	81,708	46,030	65,929	63,631
Falkland Islands	1,204	1,491	1,486	752	895	727

	1894.	1895.	1896.	1897.	1898.	1899.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Total exports of coal	31,756,000	31,714,000	32,947,000	35,354,000	35,058,000	43,108,568
Total exports of coke	588,000	700,000	676,000	978,000	770,000	....
Total exports of patent fuel	729,000	686,000	637,000	764,000	735,000	....
Total coal shipped for steamers in foreign trade	9,294,000	9,407,000	9,937,000	10,456,000	11,264,000	12,226,801
To foreign countries.						
Russia:						
Northern ports	1,737,485	1,720,508	1,784,587	1,956,811	2,155,268	3,047,489
Southern ports	111,467	90,753	73,855	58,714	39,799	226,785
Sweden	1,936,278	1,914,795	2,047,872	2,286,558	2,408,521	2,990,641
Norway	1,001,314	1,099,919	1,072,996	1,174,416	1,203,924	1,374,522
Denmark	1,552,497	1,679,024	1,691,951	1,879,182	2,045,768	2,015,090
Danish West India islands	13,483	12,183	11,622	12,148	22,481	8,128
Germany	3,893,709	4,143,718	4,522,073	5,042,781	4,711,370	5,029,130
Holland	428,027	465,776	778,716	947,235	931,184	1,195,384

[1] There are no coal reports recorded for any other part of Australasia.

British coal production, prices, wages, and exports—Continued.

EXPORTS OF COAL, CINDERS, AND PATENT FUEL—Continued.

	1894.	1895.	1896.	1897.	1898.	1899.
To foreign countries—Cont'd.						
Dutch possessions:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Java	106,512	76,616	84,445	74,131	75,743	46,407
Indian seas	24,810	19,205	8,182	....	9,939	....
Dutch Guiana	5,924	4,601	3,288	3,041	4,251	2,450
Belgium	303,859	314,136	311,682	382,653	331,540	741,093
France	5,049,080	5,067,814	5,222,593	5,697,292	5,710,113	6,544,998
Algeria	373,705	391,517	404,747	479,400	493,956	387,094
Portugal	544,883	499,259	526,434	534,422	585,174	548,073
The Azores	34,572	28,124	.39,599	53,893	58,282	85,528
Madeira	68,356	70,202	68,160	94,687	98,167	106,249
West Africa	174,546	219,582	346,517	285,302	292,020	394,770
Spain	1,708,772	1,717,372	1,746,754	1,776,524	1,407,964	1,005,171
Canary Islands	302,635	256,902	382,642	480,782	381,902	527,267
Fernando Po	504	3,601	466	3,293	539	....
Philippine and Ladrone islands[1]	8,005	3,766	8,028	5,611	7,213	....
Spanish West India islands[1]	29,576	58,404	65,352	69,113	45,504	....
Italy	4,652,717	4,311,672	4,143,939	4,834,064	4,665,166	5,235,308
Austrian territories	190,812	212,224	240,546	287,821	248,242	224,100
Greece	320,018	285,887	290,297	302,269	327,532	335,594
Bulgaria	7,947	2,276	7,215	4,301	2,215	1,716
Roumania	315,605	318,764	311,351	346,692	230,325	201,604
European Turkey	387,040	364,563	348,555	375,595	371,226	432,863
Asiatic countries:						
Asiatic Turkey	116,599	111,022	144,356	178,760	138,690	123,260
Egypt	1,659,040	1,539,754	1,772,333	1,860,723	1,907,505	2,083,683
Tripoli and Tunis	19,754	29,679	26,945	35,614	34,573	39,272
Madagascar	2,192	802	5,826	20,872	16,218	23,109
Siam	2,731	5,424	2,165	3,382	672	3,850
Cochin China, Cambodia, Tonkin China	16,405	15,211	12,386	20,391	57,064	....
China (including Hongkong and Macao)	72,207	41,968	47,966	71,175	134,625	46,554
Japan	28,675	50,542	35,313	56,889	65,342	62,088
Islands in the Pacific (except Fiji)	5,805	4,354	3,126	1,329	1,399	700
Haiti and Santo Domingo	10,230	5,417	6,886	2,943	1,441	1,895
North and South America:						
United States	197,236	265,306	138,459	153,660	109,734	118,421
Mexico	140,115	113,069	117,511	132,409	126,032	28,464
New Granada (United States of Colombia)	4,704	12,383	17,900	17,679	15,684	11,994
Venezuela	22,907	23,300	20,564	23,112	16,918	417
Peru	41,391	36,674	34,626	22,108	27,070	26,816
Bolivia	....	....	....	....	....	....
Chile	381,681	400,179	314,759	241,082	317,342	283,526
Brazil	888,217	839,143	1,003,521	1,046,075	1,010,109	918,968
Uruguay	300,239	294,371	306,963	240,494	356,225	352,970
Argentine Republic	758,710	909,283	886,946	865,345	848,119	988,311
To British possessions.						
Dominion of Canada	88,294	100,881	108,831	116,359	70,849	48,284
British Newfoundland and coast of Labrador	12,971	13,858	13,974	6,300	11,231	14,165
Channel Islands, Guernsey, Jersey, etc	141,133	130,749	143,565	146,290	142,808	141,345
Gibraltar	303,355	247,361	271,424	332,806	399,605	326,317
Malta and Gozo	442,545	389,445	345,615	454,784	462,143	111,202
Gambia and Sierra Leone	11,580	11,058	7,928	9,727	23,217	19,485
St. Helena	2,060	3,625	30	447	927	3,303
Cape of Good Hope	237,575	256,625	396,121	423,227	264,186	420,562
Mauritius	29,185	53,959	46,463	44,701	28,876	30,376
Aden	170,026	151,175	179,831	111,674	207,369	176,397
British India (exclusive of Straits Settlements and Ceylon)	784,106	819,471	542,228	208,432	335,843	....
Bombay and Scinde	680,180	687,197	452,804	152,885	301,013	411,437
Madras	81,452	102,384	61,670	39,245	14,109	6,857
Bengal and Burma	22,474	29,890	27,754	16,302	20,721	14,596
Straits Settlements	204,179	176,645	99,521	103,630	75,903	81,868
Ceylon	291,278	283,976	326,646	276,954	246,970	316,484
Hongkong	55,802	26,757	35,580	50,784	77,561	11,423
South Australia[2]	59,528	36,807	5,463	51,069	12,987	72
Bermuda	11,629	7,341	9,998	8,192	12,688	13,945
British West India islands	121,633	138,466	107,996	140,548	104,022	57,467
British Guiana	51,482	53,208	41,626	40,970	47,228	20,684
Falkland Islands	303	484	96	1,731	1,616	1,847

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[1] These countries are tabulated as though they still belonged to Spain, for the sake of uniformity.

[2] There are no coal reports recorded for any other part of Australasia.

PLYMOUTH.

Notwithstanding the fact that there are but few manufacturing establishments in the counties of Devon and Cornwall, the demand for and consumption of coal in this district is very large. Plymouth and Dartmouth are large bunkering ports for steamers engaged in the foreign trade, while the Government dock-yard and naval station at Keyham, Devonport, consume about 250,000 tons per annum. The china clay and mining industries of both Devon and Cornwall explain the large importation of coal into the ports of Exeter, Kingsbridge, Teignmouth, Fowey, and Par. This demand for coal, owing to the extension of works and growth of industry, must greatly increase. As to the total amount of coal imported and consumed in this district; I am unable to secure the exact figures, but it is estimated by reliable parties to exceed 1,000,000 tons per annum. The records of the London and South Western Railway and the Great Western Railway and the returns of the customs show that 496,000 tons were imported into the port of Plymouth alone during the year 1899. Of this amount, only 20,000 tons were anthracite, the remaining 476,000 tons being bituminous. The demand for anthracite coal is therefore very small.

The coal imported into Devon and Cornwall comes from Liverpool, South Wales ports, the Humber, the Newcastle district, and Scotland. There is no foreign coal imported. The general demand, which is fully met by the supply, is almost exclusively for bituminous coal of two kinds, which are termed house and steam coal.

During the last six months coal has varied greatly in price, owing, it is claimed, to the increased demand made by the British Government on the collieries. The present price of house coal is 22s. ($5.34) per ton, c. i. f., Plymouth, and steam coal, from 20s. ($4.86) to 24s. 16d. ($5.94) per ton, c. i. f., Plymouth.

There are no coal mines in this district, and coal is not exported.

American coal is unknown to the district, and no efforts have been made by our merchants to introduce it into this market. There are no restrictions imposed upon the importation of foreign coal into this country.

The transportation facilities from ports in the United States to Plymouth are very limited, there being no line of freight steamers trading direct. Many of the passenger liners running between New York and continental ports via Plymouth already secure their coal, for both eastward and westward voyages, at New York. The captains of these liners have repeatedly assured me that the American coal gives better satisfaction and is placed in their bunkers at New York with less delay.

The following are the leading coal merchants of Plymouth: Messrs. Fox, Sons & Co., The Parade; Messrs. Bellamy & Co., Southside street; Messrs. Emerson & Co., Barbican; Messrs. Harvey & Sons, Tamar Canal, Devonport; Messrs. Friend & Co., Stonehouse; Messrs. Polkinghorn & Co., Sutton Harbour; Messrs. Voddon & Johns, Sutton Harbour; Messrs. Westington & Stevens, Sutton Harbour; Messrs. Wade & Son, Victoria Chambers.

Many of these merchants advise me that they would be pleased to communicate with the dealers in the United States.

JOS. G. STEPHENS, *Consul.*

PLYMOUTH, *March 30, 1900.*

SHEFFIELD.

There is a great demand in this consular district for coal. The qualities especially needed are hard, strong coal for locomotive work, household coal, principally soft and free from ash, and small coals for boilers. The source of the present supply is local. There are pits within a few miles of each town; in fact, great coal fields abound in the district. Best silkstone coal is quoted at the pit mouth at from 15s. 6d. ($3.77) to 16s. ($3.89) per ton, while seconds make 12s. 6d. ($3.04) to 13s. ($3.16) per ton; Barnsley thick-seam house coal is quoted at 15s. ($3.65) for the best, and 13s. ($3.16) per ton for good secondary sorts; best steam coal is quoted at 15s. ($3.65) to 16s. ($3.89) per ton at the pits, and second qualities at 13s. ($3.16) per ton at pits to 14s. ($3.41) per ton; best screened slack is quoted at 11s. 6d. ($2.80) to 12s. 6d. ($3.04) per ton, and good ordinary slack makes 10s. ($2.43) to 10s. 6d. ($2.55) per ton, and coking smudge realizes good but irregular prices. These rates are considered high. The following are the present local prices of merchants, per ton into cart to consumers, for the qualities and district coals named: Hard picked branch, 20s. ($4.86); picked best Wallsend, 19s. 6d. ($4.74); best Barnsley, 17s. ($4.14); best low stubbin, 15s. 6d. ($3.77); cobble nuts, 15s. ($3.65); screened nuts, 15s. ($3.65); and common coal, 14s. ($3.41). On July 1 next there will probably be an increase in prices.

Much coal is exported, but local statistics showing the tonnage can not be given. Scarcity of supply can not be said to exist, but there is no surplus. The output of coal from mines in Yorkshire for the year 1899 amounted to 26,904,465 tons.

United States coal is not used, but merchants are willing to buy it at a profit. There are no tariff or similar restrictions upon importations, and transportation facilities by rail and canal are good, the shipping points being chiefly Liverpool, Manchester via the ship canal, and Hull. It is suggested that samples of American coal with prices be sent to Messrs. M. C. Burnby & Son, coal factors and exporters, Park Station, Sheffield, and to Messrs. H. A. Longbotham & Co., coal, coke, and iron merchants, High street, Sheffield.

JAMES JOHNSTON, *Consul.*

SHEFFIELD, *June 8, 1900.*

SOUTHAMPTON.

The amount of coal coming to this port is about 350,000 tons per year, of which some 280,000 tons come by sea and 70,000 by rail. Practically all this coal comes from Wales; none from America. The cost of freight from Wales averages about 4s. (96 cents) per ton. Last year, 1899, the prices here ranged from 26s. ($6.32) to 36s. ($8.75) per ton. This is for bituminous coal, which is used for steam and house purposes.

There are no large manufactories here, and the bulk of the coal is for steamers, the balance for house purposes, with a very small per cent for manufactories.

While coal reached a high figure last year, steamship companies purchasing large lots under yearly contracts bought at 15 and 16s. ($3.65 to $3.79) per ton. In the consumption of coal on steamers, the Welsh coal produces about two revolutions per minute more than the American coal.

In view of the prices at which steamship companies secure coal, the lack of manufactories at this point, and the superiority claimed for the Welsh coal in power-producing quality, it is doubtful if a very profitable market would be found here for coal for steam purposes.

The indications are that coal for house use will average 30s. ($7.30) per ton the coming year. Not less than 100,000 tons are used here annually. This coal is sold in sacks containing 100 or 200 pounds each. Less is used here by a family than would be used in the United States. The coal appears to me to be a trifle softer; it burns with little or no waste; leaves comparatively no "clinkers" and very little ashes. It does not seem to produce the heat of American coal. It should be remembered, in regard to the consumption of coal here per family as compared with the United States, that all fires are grate fires, and rooms are considered heated when at a temperature of 60°.

Coal in Wales can not be produced as cheaply as in the United States. The veins are not so easy of access and when reached are but 3 and 4 feet in thickness, so that the cost of mining alone is $1.50 to $1.75 per ton.

In my opinion, coal for house purposes could be sent here from the United States at a profit. There are no tariffs or restrictions placed on imported coal.

There are no coal mines in this section, the nearest coal fields being Wales; coal comes here for steamer and domestic purposes, and practically none is exported.

In this report, I desire to call attention to the fact that a ton of coal is estimated at 2,240 pounds, 20 hundredweight of 112 pounds each.

JOHN E. HOPLEY, *Consul.*

SOUTHAMPTON, *April 4, 1900.*

TUNSTALL.

This is a very large coal-producing as well as coal-consuming district. In 1870, there were 108 collieries, producing 3,873,562 tons. In 1880, the number had increased to 144 collieries, producing 4,083,290 tons. In 1887, the demand had increased the output to 4,679,000 tons, but competition made the average price per ton only 6s. 9d. or $1.64. In 1894, a further increased output was reported which brought the total up to 4,954,341 tons for the year. The returns for the calendar year just ended show the output to be 5,311,000 tons. Of this output, approximately two-thirds is consumed in the district among the pottery manufacturers and householders; the remainder is exported to other parts of England over the London and Northwestern, Great Northern, and North Staffordshire railways, or by the canal owned by the latter road to prevent competition. Small canal boats carrying about 20 tons are used. The coal can be carried to all the principal ports and centers of England by connecting canals.

No anthracite coal is used, so far as I have been able to find. Few even of the well-informed have ever seen it.

The whole of the coal consumed is bituminous, and the prices it commands are as follows: For manufacturing purposes—Slack, 8s. or $1.95 per ton; inferior coal, 11s. 6d. or $2.80 per ton; best coal, 13s. or $3.16 per ton. For household purposes—Slack, 11s. 8d. or $2.84 per ton; inferior coal, 16s. or $3.89 per ton; best coal, 16s. 10d. or $4.09 per ton.

A rise of 2s. or 49 cents per ton for manufacturing coal is anticipated in a few days.

The prices quoted do not include delivery; for this, an addition of from 6d. (12 cents) to 3s. (73 cents) per ton is made, depending on distance within a 25-mile radius.

The natural route for shipments from the United States to outlying parts of this district would be to Liverpool or Runcorn by ship, and thence by canal.

WM. HARRISON BRADLEY, *Consul.*

TUNSTALL, *April 12, 1900.*

IRELAND.

BELFAST.

Belfast being a great manufacturing and commercial center, the consumption of coal is very large, and the home production being exceedingly limited, the demands of the different manufacturing industries are supplied almost entirely by importations. The total consumption in this city during the year 1899 was 1,201,764 tons, and in the year 1898, 1,166,577 tons, showing an increase of 35,187 tons. The coals used are Welsh, Scottish steam, and English. For steam purposes, the Welsh coal is principally used, being considered the best. The country merchants and smaller merchants of Belfast use Scotch coal, and the better class of population and larger merchants use English coal. The Welsh coal at present commands $4.86 per ton; Scotch steam, $3.77 per ton; English, $4.74 per ton, although the latter was very much higher during the past winter, commanding as much as $6.80 per ton. The English coal is principally shipped from Liverpool, the Welsh coal from Cardiff, and the Scotch coal from the collieries in and around Ayrshire.

American coal is not sold in this market. Irish coal comes from what is known as the Dungannon district. It is considered of a very poor quality and the output is very small. The majority of the people in the neighborhood of the Dungannon district use English and Scotch coal in preference.

There are no tariff restrictions on coal, although there are harbor dues of 3 cents per ton on imported coals.

The facilities for the transportation of coal between this port and the United States are fairly good. Tramp steamers frequently call here, and besides there are two regular lines, the Lord line plying between Belfast and Newport News and Baltimore, and the Head line running to New Orleans.

I am advised by those engaged in the trade that a considerable rise in the price of coal may be expected within the next month. There will be an increase of 20 per cent in the wages of the Welsh colliers, and at the end of this year about 15 per cent advance will be made to those of the midlands. It is estimated that the coal that used to cost about $2.12 per ton at the pits will now cost about $3.40, and the indications are that for household use especially, the price will be greatly advanced.

There is a constantly increasing demand for coal, and it appears that the collieries have reached their limit of production. The South African war, which has greatly increased the demands of the English Admiralty, has reduced the amount of coal for export in Great Britain, as well as advanced the price. The result will be that buyers must look to other markets for their supply. If American coal producers can avail themselves of the opportunity to make known to foreign consumers and dealers the fine quality of our coal, it would not seem difficult to find a steady market for the American product, provided the cost of transportation could be reduced so as to make it profitable to engage in its export.

WILLIAM W. TOUVELLE,
Consul.

BELFAST, *May 9, 1900.*

CORK (QUEENSTOWN.)

There are about 375,000 tons imported yearly, mostly English coal, with some Scotch. No American coal has been imported here. The principal imports are for house use, also a considerable quantity for steaming purposes. No anthracite is used here. The best qualities of English coal, from Lancashire, Staffordshire, and the Bristol Channel ports, cost at present £1 ($4.86) per ton f. o. b.; steam coal, 2s. (48 cents) per ton less. The poorer quality of English and all Scotch cost 15s. ($3.64) per ton. To the above prices must be added freight, say 5s. ($1.21) per ton, making the cost to the merchant from 20 to 25s. ($4.86 to $6.07) per ton in Cork. There are also harbor dues of 1 penny 3 farthings per ton, but no duty on foreign coal.

Two of the largest importers are Abraham Sutton, Lapps quay, and J. A. Harley & Co., Patricks quay, Cork.

DANIEL SWINEY, *Consul.*

CORK, *March 30, 1900.*

DUBLIN.

The amount of coal used at this port and vicinity is about 1,000,000 tons per annum; all of which is imported from England, Scotland, and Wales. No coal to any extent is mined or shipped from this district, although there are mines in county Kilkenny which produce a good anthracite. The quantity consumed is small in proportion to the population, as the poorer people use peat or turf. As the temperature is never extremely cold, very few houses have heating arrangements other than grate fires, which are lighted only during the colder weather. Gas is also used as a fuel to some extent both for heating and cooking, the price being 85 cents a thousand feet.

The kinds of coal used here are bituminous for house, steam, and gas purposes, and a small amount of anthracite for malting. No American coal is used.

In ordinary times, house coal retails at from $3.65 to $4.87 a ton. (A ton here is always a long ton of 2,240 pounds.) At present the price is from $5.60 to $6.33 per ton, according to quality. Steam coal is ordinarily sold at from $4.38 to $5.60 per ton, and is about the same price now; anthracite, $5.47.

It is customary for the larger dealers and consumers to make contracts for a year ahead, lower prices being quoted where large quantities are concerned. One large consumer, whose contract last year was $3.71 a ton delivered in Dublin, has recently contracted for some time ahead, paying $4.25 a ton delivered in Dublin. Another large consumer, whose contract is still running at $2.92 a ton delivered, is open to make contract for the coming year.

It is intimated that some of the large dealers have interests in the English coal mines and could not be induced to take up any other coal. There are dealers as well as consumers whose only interest is to buy good coal as cheaply as possible, and who would be open to negotiations for American coal.

One drawback to the introduction of American coal is the limited harbor facilities for landing and storing. Only two or three consumers are so situated as to be able to handle cargoes of from 3,000 to 4,000 tons. For that reason, nearly all the coal is brought in small vessels carrying from 300 to 700 tons. Some dealers own their own fleet of vessels, which ply between Dublin and the coal ports, bringing small cargoes, but delivering regularly as consumed or sold.

There is no duty on coal imported.

The facilities for handling coal, with two or three exceptions, are very crude, manual labor being often used in place of machinery.

It is the general opinion of people in the trade that while the demand for house purposes will decline, as is usual at this season of the year, the prices will not be lowered before next spring.

To introduce American coal, it would be best for the exporter to send an expert salesman here prepared to give prices in pounds sterling, delivered in Dublin. If such agent would consult the consul, there is no doubt that with patience and prompt fulfillment of promises, a large market could be established.

JOSHUA WILBOUR, *Consul.*

DUBLIN, *April 30, 1900.*

SUPPLEMENTAL.

In addition to my previous report, I would say it is reported that the Alliance and Dublin Consumers' Gas Company, Limited, of this city, whose three contracts for coal, expiring in August and October next, which were at the rate of 12s. 6d. ($3.04) and 12s. 7½d. ($3.07), respectively, per ton, c. i. f., has renewed same for twelve months, the August at 22s. 3d. ($5.39) and 22s. ($5.35) per ton, and October at 21s. 6d. ($5.23).

It is estimated that this advance in the price of coal increases the cost of production of gas 1s. (24 cents) per 1,000 cubic feet.

Board of Trade official returns show that 10,500,000 tons of coal were consumed by railway locomotives the past year. As this fuel has advanced fully 8s. ($1.94) per ton within the past two years, the increased cost to the railways in this respect will be for this year £4,200,000 ($20,439,300).

JOSHUA WILBOUR, *Consul.*

DUBLIN, *June 25, 1900.*

SCOTLAND.

DUNDEE.

The coal used in this district is almost wholly obtained from the county of Fife, which is separated from Dundee by the river Tay, the pits being situated from 20 to 40 miles from the city. There is an abundant supply, and new pits are being frequently opened. A smaller proportion is drawn from the Glasgow and West of Scotland district, and a still smaller quantity from the English mines. The consumption of the latter coal in this district has been falling for some years, as consumers seem to have overcome a prejudice which existed against Scotch coal and are now using it in larger quantities, both in steam raising and for household purposes. At present, prices are very much inflated for some reason which is difficult of explanation, but probably one cause is an insufficiency of labor in the transportation division of the industry, as it is understood that large quantities of coal are lying at the pit heads awaiting removal. It is fully expected in the trade that these high prices will be maintained for some considerable time—all the present year, at any rate.

I have obtained and send herewith a price list giving the prices at the pit head of coal extracted by the Lochgelly Iron and Coal Company, Limited, and the Fife Coal Company, Limited, both large colliery companies in the county of Fife; also the price list of the Cadzow Coal Company, Limited, Glasgow. To these prices must be added the cost of carriage to this district, which, in the case of the Fife colliers, is 4s. 2d. ($1.01) per ton, and for Glasgow 5s. 2d. ($1.25) per ton, delivered at the place of consumption.

As to quality, these coals are analogous to those of Pennsylvania and western Maryland, but contain rather more bitumen, are more easily lighted, and somewhat freer burning.

The local dealers here express a decided doubt as to whether there is, under present circumstances, a profitable demand for American coal in this market, but of that American shippers can judge, now that the figures are in their hands. There is no anthracite coal mined in this country.

JOHN C. HIGGINS, *Consul.*

DUNDEE, *April 10, 1900.*

Price lists (per ton) of the two largest coal companies in Fife; also of a west country coal company.

LOCHGELLY IRON AND COAL COMPANY, LIMITED, FIFE.

Name of coal.	English value.		United States equivalent.
	s.	*d.*	
Great splint	14	6	$3.52
Splint household	14	0	3.40
Diamond household	12	6	3.04
Mynheer	12	6	3.04
Mynheer special	13	0	3.16
Splint chews	12	0	2.92
Household chews	12	0	2.92
Household, for bagging	11	3	2.73
Five-feet coal	11	3	2.73
Steam coal	11	0	2.67
Washed nuts	10	3	2.49
Chirls	10	0	2.43
Small coal	7	9	1.88
Washed beans	6	9	1.64

FIFE COAL COMPANY, LIMITED, LEVEN, FIFE.

[Kelty, Hill of Beath, and Dalbeath.]

Aitken Wallsend household coal (single screened)	17	6	4.25
Aitken Hartley household coal	15	0	3.65
Aitken chirls	14	0	3.40
Aitken treble nuts	13	6	3.28
Dunfermline splint:			
Double screened	18	0	4.38
Single screened	17	0	4.13
Dunfermline bagging coal	16	6	4.01
Dunfermline splint chirls	15	0	3.65
Dunfermline splint nuts	13	0	3.16
Jewel chirls	13	0	3.16
Steam chirls	12	6	3.04
Steam nuts	12	0	2.92
Bank splint and Lochgelly splint	14	6	3.52
Jewel household coal	14	6	3.52
Steam chew coal:			
Screened	13	0	3.16
Double screened	13	6	3.28
Steam small coal	9	3	2.25
Screened single nuts	9	3	2.25
Lumphinanns.			
Parrot or cannel coal	15	0	3.65
Dunfermline splint	17	0	4.13
Dunfermline extra screened	18	0	4.38
Dunfermline chirl coal	15	0	3.65
Mynheer household coal	15	0	3.65
Common household coal	14	3	3.46
Five-feet coal	14	6	3.52
Lochgelly splint great coal	18	6	4.50
Lochgelly splint chew coal	14	6	3.52
Steam coal	13	6	3.28
Jumbo nut coal	12	6	3.04
Treble nut coal	12	3	2.98

CADZOW COAL COMPANY, LIMITED, GLASGOW.

[At pit.]

Picked best ell coal	15	0	3.65
Picked oak coal	14	0	3.40
Picked jewel coal	14	0	3.40
Splint pugs	12	6	3.04
Nuts	12	6	3.04
Ell dross	8	6	2.06
Oak dross	7	9	1.88
Jewel dross	7	9	1.88
Splint dross	7	0	1.70

DUNFERMLINE.

Coal mining is one of the leading industries of this section of Scotland, and has been developed to a remarkable extent in recent years.

Many new pits have been sunk in the county of Fife within the past few years, and should the present demand continue, it is safe to say that many more will be opened soon in the vast undeveloped coal fields lying between Dunfermline and Leven.

Coal mining in this consular district is confined almost entirely to the county of Fife, the counties of Clackmannan and Kinross yielding comparatively little, as is shown by the following statistics:

	Tons.
Output in 1897 of—	
Fife mines	4,077,818
Clackmannan mines	341,798
Kinross mines	1,460
Total output of district	4,421,076
Output in 1898 of—	
Fife mines	4,447,569
Clackmannan mines	345,632
Kinross mines	1,265
Total output of district	4,794,466
Output in 1899 of—	
Fife mines	4,927,489
Clackmannan mines	366,697
Kinross mines	1,600
Total output of district	5,295,786

The entire output of coal in Scotland in 1898 was 30,237,295 tons, and in 1899, 31,142,612 tons, an increase of 905,317 tons.

The total coal exports from Scotland in 1898 were 9,687,449 tons, and in 1899, 8,982,700 tons, a decrease of 704,749 tons.

The exports from Fife ports in 1898 were 2,483,129 tons, and in 1899 2,500,455 tons, an increase of 17,316 tons.

The prices of coal per ton at pits for industrial purposes ranged in 1897 from 2s. (50 cents) to 5s. 6d. ($1.30); 1898, from 3s. 6d. (85 cents) to 7s. ($1.70); 1899, from 4s. (97 cents) to 8s. 6d. ($2.07). Present prices from 4s. 6d. ($1.10) to 9s. ($2.19).

The cheapest of these grades, however, are practically coal refuse.

The export prices of coal per ton f. o. b. at shipping ports in Fife district ranged in 1897 from 6s. 9d. ($1.64) to 9s. ($2.19); 1898, from 7s. 6d. ($1.83) to 10s. 6d. (2.56); 1899, from 8s. ($1.95) to 11s. 6d. ($2.80). Present prices, from 8s. 6d. ($2.07) to 12s. 6d. ($3.04), are well maintained.

A better quality than above, for home consumption, sold per ton at pits in 1897 at 7s. 6d. ($1.83) to 9s. 6d. ($2.31); 1898 at 8s. 6d. ($2.07) to 10s. ($2.43); 1899 at 9s. ($2.19) to 13s. ($3.16). Present prices, from 9s. 6d. ($2.31) to 13s. 6d. ($3.29) per ton, are firm.

The steady and marked advance in prices of coal here since 1897 arises chiefly from the following causes:

The enormous consumption of iron, which has always practically controlled the Scotch coal market.

The general industrial prosperity, owing to the unusual activity in the iron and steel industries, which have been greatly stimulated by the increased demands of the shipbuilding trade.

The heavy demands for coal by Government transports to South Africa since the breaking out of the war between Great Britain and the South African Republics.

The valuable Government contracts, secured by manufacturers and dealers to furnish supplies for the British armies engaged in the South African war.

The coal crisis in Russia and the increased demand in other continental countries, the result of strikes.

In this connection, I would say that a large percentage of the coal exported from Fife goes to Baltic seaports, which are closed from the beginning of December till the 1st of April.

During the open season of the Baltic, there is a rush of boats for coal to the harbors along the Forth, in this consular district.

The coal traffic between the mines and shipping ports was so great during the past year that the railway companies were at times unable to cope with it, owing to the lack of engines and a sufficient number of coal trucks, causing delay in the loading of vessels and thus reducing the possible export trade for the season.

J. N. McCunn, *Consul.*

Dunfermline, *April 13, 1900.*

SUPPLEMENTAL.

Consul McCunn sends from Dunfermline, June 1, 1900, the following clipping from the Scotsman of even date:

> The enhanced price of coal in this country is undoubtedly affording an opening to the Americans to tap some of the foreign markets. How long North American bituminous coal can be exported to France and Russia at a profit depends a good deal upon the tendency of prices in this country. High freights have made the experiment a little difficult, but freights may possibly rule lower after the strain of the South African war has passed away. But the fact remains that, in spite of disadvantages as to freight and distance, the Paris, Lyons and Mediterranean Railway Company have contracted for a delivery of close upon 50,000 tons of coal with the North American New River Coal Company. The fuel, which is for use on the railway, is soft bituminous steam coal of a quality equal to the lower grades of Welsh coal, and it is delivered to the company at Marseilles for 28s. ($6.80) a ton. Some French manufacturers are also going to give the coal a trial, and it is calculated that during

the present year, probably not much short of 200,000 tons of the American coal will be delivered in France. Shipments of about 60,000 tons a month, beginning in June, are to be made to Germany and Belgium, and the Russian Government has given an order for a considerable quantity for use on the State railways. It will be interesting to watch to what extent the trade will go. A fall in prices in the British market would seriously jeopardize the American competition, owing to the heavy charges for freight.

EDINBURGH.

Apart from the small quantity of cannel coal used in gas works, practically all of the coal consumed in this part of Scotland is bituminous. The only coal in the market here is that from the Scotch mines, except occasional shipments from the Tyne and from Wales, the superior quality of these coals creating a moderate demand despite the higher price on account of the cost of transportation.

In the trades, Scotch coals are known as household, steam, anthracite or smokeless, and cannel. The so-called anthracite—of which only 207,240 tons were produced in 1898—is a hard coal, but bituminous and used chiefly in breweries and other establishments where a slow-burning and smokeless coal is required. Household is the best quality of coal produced, and is rated in the market according to convenience of size, cleanness, etc. Of steam coal, there are two grades—unscreened (the coal as it is taken from the pit) and screened, the latter being divided into "nut," "beans," "peas," and "duff." The sizes indicated by these terms range from the largest down to the dross.

Official statistics of coal production and exports in 1899 have not yet been issued by the home office. In 1898, the total output of coal in Scotland was 30,237,295 tons, an increase over the preceding year of 1,154,299 tons. The output of the east coast, by counties, was as follows:

	Tons.
Fife	4,447,569
Edinburgh	1,244,747
Haddington	410,740
Linlithgow	910,331
Clackmannan	345,632
East Stirling	1,283,542
Total	8,642,561

The production of the east coast in 1897 was 8,092,885 tons. There can be no doubt that the official figures, when published, will show an output last year somewhat greater than that of 1898. The growth of the coal industry has been constant for several years.

It is said by mine owners and coal dealers that the present prices of coal are unprecedented in the past quarter of a century. The rise began in October, 1899. At first the upward movement was gradual.

High figures were reached about the middle of December, and since that time, there has been some advance in steam and household coals. Taking the average prices at the pit, steam coal is now about 45 per cent higher, and household coal, cannel, and smokeless coals from 25 to 33 per cent higher, than they were last summer. Steam coal, unscreened, varies from $1.70 to $2.43 per ton, according to quality. For the screened coal the quotations at this time are, "nut," $2.92; "beans," $2.67; "peas," $2.43; "duff," $1.70. Household coal is from $3.16 to $4.25 at the pit, the average being about $3.65; cannel is $6.08 and anthracite or smokeless $3.65. In August, 1899, the finest steam coal (nut) was $2.19 at the pit; household, $2.79; cannel, $4.38, and smokeless, $2.43.

If all grades be taken into account, the average price of coal, delivered in the yards of dealers in Edinburgh and Leith, or on the wharf at any shipping point on this coast, is about 50 per cent higher than at the pit's mouth.

The current retail prices of good household coal (ton lots) in this city are from $5.35 to $6.08 per ton.

Leading men in the trade confess themselves at a loss to understand fully the cause or causes of the extraordinary rise in the coal market, the more so because production has not been falling off, but increasing. They say that it is due obviously, in the first place, to the industrial activity in Great Britain, and secondly, to the remarkable demand from the Continent, especially from Russia. No explanation of this continental demand is offered, except the general one that the industries are everywhere active, though some exporters do not think that this accounts for the heavy supplies of coal going to Russia.

The course of the export trade in coal from the east of Scotland is shown by the following statistics of shipments from Firth of Forth ports:

	Tons.
1897	4,823,746
1898	5,489,380
1899	5,416,731
1899 (first 3 months)	990,949
1900 (first 3 months)	1,479,363

Prices of coal exported vary somewhat at the different shipping points on the Forth. The average prices, f. o. b., are: Steam coal, $3.28 to $3.65 per ton; ell coal, $3.52 to $3.65, according to quality; splint coal, $3.40 to $3.52; main coal, $3.34 to $3.40.

Scotch coal goes largely to Baltic and North Sea ports. During the past year, shipments to Brazil have considerably increased. The coastwise trade is a very small item. In 1898, only 254,444 tons went coastwise.

The vast bulk of the coal exported goes in steamers. The rates at this time from Forth ports are here given, approximately:

Danish ports	$1.94	Pernau	$1.82
Veile	1.82	Helsinborg and Malmo	1.46
Korsoer and Aalborg	1.70	Harnaes	1.88
Copenhagen	1.64	Norrkoping	1.94
Kiel	1.70	Stockholm	1.88
Lubeck	1.76	Lulea	1.94
Neustadt and Rostock	1.88	Christiania	1.70
Swinemunde	1.61	Drontheim	1.76
Stettin	1.73	North Norway	1.64
Fairwater	1.70	Helsingfors	1.88
Memel	1.82	Koenigsberg	2.19
Libau	1.82	Cronstadt	1.94
Riga	1.82	Algiers	2.37
Barcelona	2.92	Valencia	2.43
Venice	3.40	Trieste	3.40
Alexandria	2.92	River Plate	3.89
Rio Janeiro	4.38	Bayonne	1.33
Seville	1.94	Honfleur	1.58
London	1.09	Gluckstadt	1.64
Trouville	1.70	Hamburg	1.33
St. Servan	1.70	Dieppe	1.46
St. Brieux	1.70	Rotterdam	1.46

The dock rate on coal at the port of Leith (outward or inward) is 2 cents per ton.

I believe that no coal from the United States has yet come to this coast, and therefore no ocean freight rates from any American port can be quoted by shipping agents here. Dealers have considered the probability of American bituminous coal being offered in this market if the present high prices should continue. It is not thought that anthracite could gain a considerable market at whatever price offered, inasmuch as houses are almost universally heated by grates in which only soft coal is used.

East of Scotland coal exporters are already taking notice of American competition at Mediterranean ports.

RUFUS FLEMING, *Consul.*

EDINBURGH, *April 5, 1900.*

GLASGOW.

There is no opening in the market here for imported coal. Glasgow is in the center of the coal-producing district of Scotland. In the near neighborhood are the Lanarkshire coal fields, the principal ones of Scotland, consisting of about 50 collieries. Not far distant, and within the Glasgow consular district, are the Ayrshire coal fields, consisting of from 20 to 30 collieries.

The production of these collieries is more than sufficient to meet the local demand. A considerable quantity of coal is exported; indeed, I learn from an authoritative source that about half the coal produced in this district is exported.

There does not seem to be any appreciable scarcity of coal here. It is the increased demand which is affecting the market and raising the prices.

There is no American coal used in this district. The qualities of such coal are therefore unknown to the general consumer. The prevailing feeling among the merchants or dealers is that certain classes of American coal would commend themselves so far as quality is concerned, but that the attempt to introduce it here would be utterly futile, in view of the prevailing prices and plentiful supply.

The following are the various classes of coal produced in this district, with the prices they command at the present time:

	Per ton.
Household coal	$4.38
Hard splint coal (for public works)	3.89
Treble nuts	3.40
Double nuts	3.16
Single nuts	2.92
Dross	2.55

These are the prices at which the coal is sold to the consumer within a radius of 25 miles of Glasgow; for the immediate neighborhood of Glasgow the prices are about 24 cents less, and the prices accepted by the coal masters at the pit are about 60 cents less.

The coal masters are prepared to enter into contract to supply coal at the above prices for one year, so that this would point to no change being anticipated during that period.

The prices stated are about 30 per cent higher than those prevailing this time last year.

The quantity of coal consumed in Glasgow and vicinity may be reasonably estimated at 3,500,000 tons.

SAMUEL M. TAYLOR, *Consul.*

GLASGOW, *April 3, 1900.*

WALES.

CARDIFF.

There is no demand in this port for American coal, either bituminous or anthracite.

To bring coal into this port from the United States would be an illustration of the old adage of "carrying coals to Newcastle," Cardiff being the chief coal emporium in the world.

The last annual report of the Cardiff Chamber of Commerce furnishes the following statistics: Exports of coal, coke, and patent fuel for the year 1899 aggregated 19,306,562 tons, showing an advance on the year of 1897 of 2,309,143 tons. A comparison with 1898 is regarded valueless because of the great strike in that year.

The prices obtained for recent exports of coal have not been equaled since the high tide of prosperity in the years 1872 and 1873. During December of last year, and January of this year, the price varied from 28s. ($6.81) to 30s. ($7.30) per ton for the best steam coal. Since January, while the miners' wages have advanced, the price of coal exported has been reduced to 23s. ($5.60) per ton for very best Cardiff steam coal; other coals, 18s. ($4.38) to 20s. 6d. per ton, according to quality. The same report states that the increase in the value of coal is due in some measure to the war between England and the South African Republics, and also to the great manufacturing activity which has prevailed in England and on the Continent. This prosperous condition, the report adds, is likely to continue for a considerable period.

The sources from which the present coal supply is obtained are: Cory's Penrhykiber coal, Penrhykiber; Cory's Gelli coal, Gelli; Fred Davies's Ferndale coal, Ferndale; Ocean coal, Cilfynydd and other places; Cambrian coal, Dinas and other mines; National Colliery, Pontypridd, etc.; International Colliery, Pontypridd, etc.; Great Western Colliery, Hafod, etc.; Nixon's Navigation Colliery, Mountain Ash and Merthyr Vale; Lockett's Colliery, Merthyr Tydvil; Hill's Plymouth Colliery, Merthyr Tydvil; Glamorgan Coal Company, (Hood's) Merthyr; Lewis Colliery, Merthyr Tydvil; Standard Merthyr Colliery, Yngshir. These are among the noted collieries of Glamorganshire. There are hundreds of collieries well known in Wales, which supply the local demand. House coal ranges from 22s. ($4.35) to 27s. ($6.57) per ton.

Anthracite coal is not in demand at this port. I learn that it is chiefly used in London.

Welsh coals are exported to all parts of the world, the largest shipments being to Port Said, Genoa, Buenos Ayres, Cape Verde, Marseilles, Malta, Las Palmas, Alexandra, Bordeaux, Cape Town, Colombo, Cronstadt, Havre, Hamburg, La Rochelle, Madeira, Barcelona, Constantinople, Bombay, Bayonne, Chanteney, Lisbon, Leghorn, Naples, Rio de Janeiro, St. Nazaire, Venice, Teneriffe, Savona, Singapore, Santos, Rouen, Odessa, Piræus, and Montevideo. The extent of these exports I have already noted, so far as the year 1899 is concerned. For this year, the exports are as follows (January 1 to March 31, 1900):

	Tons.
Cardiff:	
Foreign	3,477,695
Coastwise	625,629
Newport:	
Foreign	717,534
Coastwise	211,540

	Tons.
Swansea:	
Foreign	415,541
Coastwise	143,498
Llanelly:	
Foreign	44,099
Coastwise	17,541
Total	5,653,077

There is no tariff or other restriction upon coal importations in this port. In conclusion, I wish to state that I have done all in my power to champion American coals here, and have appealed to the chamber of commerce to facilitate my efforts in this direction, assigning as my reasons that we could compete in quality and prices, and could well supply any deficiency that might exist in the coal stock of this port. The members simply smiled at my proposition. I should add that Messrs. Hull, Blythe & Co., of Cardiff and London, do a brisk business in Pocahontas coals for the Continent (600,000 tons), and largely supply the Cunard and White Star companies.

DANIEL T. PHILLIPS, *Consul.*

CARDIFF, *May 7, 1900.*

AMERICA.

DOMINION OF CANADA.

GENERAL REPORT.

Anthracite coal is admitted into Canada free of duty, and the consumption is quite large. The kinds used are furnace, egg, stove, and chestnut. These command in this market the following prices: Furnace, $5.50 per ton; egg, $5.50; stove, $5.75; chestnut, $5.75. Nearly all comes from Pennsylvania, Lehigh Valley, Lackawanna Valley, and Wyoming Valley. The principal port of shipment is Scranton.

American bituminous coal is of a better quality than that procured in Canada, and a considerable quantity is imported. I am assured the consumption would be greater were it not for the Canadian tariff. Here are the Canadian tariff provisions:

> Bituminous slack coal, such as will pass through a half-inch screen, subject to regulations to be made by the Comptroller of Customs, 20 per cent ad valorem, but not to exceed 13 cents per ton of 2,000 pounds (being the equivalent of 15 cents per ton of 2,240 pounds): *Provided,* That if the United States Congress fixes the duty on such slack coal at a rate not exceeding 15 cents per ton of 2,240 pounds, then the duty on such coal imported into Canada, as provided in this item, shall be the minimum duty on such coal from all countries, notwithstanding section 17 of this act, 20 per cent.
>
> Coal, bituminous, round and run of mine, and coal, n. e. s., 53 cents per ton of 2,000 pounds (being the equivalent of 60 cents per ton of 2,240 pounds): *Provided,* That if the United States Congress fixes the duty on such coal at a rate not exceeding 40 cents per ton of 2,240 pounds, the governor in council may by proclamation reduce the duty mentioned in this item to 40 cents per ton of 2,240 pounds, or the equivalent thereof per ton of 2,000 pounds, and the duty declared by such proclamation shall then be the minimum duty on such coal from all countries, notwithstanding section 17 of this act (duty, 53 cents per ton of 2,000 pounds).

Were it not for this tariff, a great deal of Ohio and West Virginia coal would be used here, especially by the railroads.

By far the larger portions of the importations of both anthracite and bituminous coal are into the Provinces of Ontario and Quebec. Freight rates from the United States mines to Canada are very reasonable.

The native steam coal used comes from Sidney, Cape Breton, and Pictou, Nova Scotia, and is sold at $4.50 per ton.

Steamers plying between here and British ports use a good deal of Scotch coal, which is sold here at $4.75 per ton.

Amount of anthracite coal and anthracite coal dust imported into Canada from all countries for the year ended June 30, 1899.

	Quantity.	Value.
Coal, anthracite, and anthracite coal dust:		
From—	*Tons.*	
United States	1,745,332	$6,490,147
Great Britain	128	362
Total	1,745,460	6,490,509
Distributed to—		
Ontario	1,202,841	4,394,495
Quebec	424,460	1,687,424
Nova Scotia	39,649	138,308
New Brunswick	58,572	182,578
Manitoba	17,524	79,720
British Columbia	160	562
Prince Edward Island	2,214	7,083
Yukon	40	339
Total	1,745,460	6,490,509

The amount of bituminous coal imported into Canada in the year ended June 30, 1899, and duty collected, are given as follows:

	Quantity.	Value.	Duty collected.
Coal, bituminous:			
From—	*Tons.*		
United States	2,135,005	$3,626,441.00	$1,131,555.70
Great Britain	36,341	65,485.00	14,886.78
Australasia	12	20.00	6.36
Total	2,171,358	3,691,946.00	1,146,448.84
Distributed to—			
Ontario	2,074,311	3,473,722.00	1,099,384.59
Quebec	65,040	132,727.00	30,163.66
Nova Scotia	2,085	5,307.00	1,125.65
New Brunswick	1,450	3,095.00	681.65
Manitoba	23,530	46,941.00	12,471.79
British Columbia	3,738	24,317.00	1,983.38
Northwest Territory	1,194	5,777.00	632.82
Yukon	10	60.00	5.30
Total	2,171,358	3,691,946.00	1,146,448.84
Coal dust, n. e. s.:			
From—			
United States	271,729	38,171.00	7,511.94
Great Britain	4,818	6,546.00	469.77
Total	276,547	44,717.00	7,981.71
Distributed to—			
Ontario	270,511	36,985.00	7,397.00
Quebec	6,010	7,648.00	581.30
British Columbia	26	80.00	3.34
Northwest Territory	....	4.00	.07
Total	276,547	44,717.00	7,981.71

The total value of coal exported from Canada to the United States during the years 1893 to 1898 is stated as follows:

1893	$3,114,558
1894	3,321,565
1895	3,578,195
1896	3,249,069
1897	3,330,017
1898	3,273,415

Exact figures for 1899 are not obtainable, but the estimate is about the same as the previous year.

THE COAL AREAS OF CANADA.

It is estimated by the Geological Survey Department of the Dominion of Canada, that the coal areas of the country cover about 97,000 square miles, not including areas known, but as yet undeveloped, in the far north.

The coal areas in Nova Scotia cover 635 square miles. They are divided into Cape Breton, Pictou, and the Cumberland basins.

The workable thickness of the coal in Nova Scotia is very great; in Cape Breton, a total of from 25 to 60 feet; in Pictou at least 70 feet, and in Cumberland, fully 30 feet. If the workable area is reduced one-quarter, say from 407,400 acres, as has been estimated, to 300,000 acres, and the average thickness put at 25 feet, on the basis of 1,000 tons of coal an acre for every foot of coal, the amount of coal in the measures of Nova Scotia is 7,000.000,000 tons.

New Brunswick contains, so far as known, no seams of sufficient magnitude to be worked successfully in competition with the Cumberland mines.

In the Province of Quebec, no coal has been found.

Alberta (Northwest Territory) has an extensive area. There are great deposits of anthracite, bituminous, semibituminous, and lignite. Lignites are mined at Medicine Hat, Cypress Hills, Red Deer, Otoskiwan, Edmonton, Sturgeon River, and Victoria, and are obtained at the pit's mouth at from 65 cents to $2.50 per ton.

The semibituminous is mined at Lethbridge, Pot Hole, Milk River Ridge, Woodpecker, Crowfeet, and Knee Hill Creek, and is obtained at the mines at $1.50 to $3 per ton. The true bituminous is mined at Waterton River, Pincher Creek, on each side of the south, middle, and north branches of the Old Mans River, on High River, Sheep Creek, Fish Creek, Bow River, and Canmore, and brings prices similar to the semibituminous.

Anthracite is mined at Anthracite (4 miles from Banff), and is sold aboard cars at $2 to $5 per ton, according to grade. There are extensive collieries at Lethbridge, Canmore, and Anthracite.

The Government issues permits to mine on Dominion lands at the following royalties: 10 cents per ton for lignites, 15 cents for bituminous, and 20 cents for anthracite.

Government coal lands, if surveyed, can be purchased by one individual to the extent of 320 acres; price, $10 per acre for soft coal, $20 per acre for anthracite. Purchaser has no royalty to pay, nor is he compelled to work claim.

The coal areas of Manitoba are roughly estimated at 15,000 square miles. They yield lignites only, of a fair quality.

There are immense deposits of coal in British Columbia. The coal fields of the Crows Nest Pass, in East Kootenay, recently opened, are believed to rank high among the coal depositories of the world in extent and value.

There are many seams of cannel coal, while others of a lower level are anthracite in their nature. Coal is exposed to the extent of 148 feet in thickness. Much of this coal can be utilized for coking purposes. Two hundred coke ovens have been put in operation since the railroad entered the region, less than a year ago.

Bituminous coal has been extensively worked for many years past at Nanaimo, on Vancouver Island. In the New Westminster and Nichola districts, on the mainland, there are also large deposits.

While it is claimed by many that Canadian coals are equal to those of the United States, consumers generally do not agree with the enthusiasts.

At the Montreal meeting of the British Association, a paper was read on Canadian coals from three districts. The paper gave the following analyses:

	Cape Breton.	Pictou.	Cumberland.
	Per cent.	*Per cent.*	*Per cent.*
Water	0.75	1.19	1.46
Volatile combustible	37.26	29.10	33.69
Fixed carbon	58.74	60.63	59.35
Ash	3.25	9.34	5.50

The analysis of the Manitoba lignites gives the following results:

	Per cent.
Water	15.40
Volatile combustible	37.97
Fixed carbon	41.21
Ash	5.36

Analyses of the coal found in the area (50,000 square miles) extending along the base of the Rocky Mountains from the international boundary to the vicinity of the Peace River—a distance of 500 miles—give the following results:

	Belly River.	Bow River.	Peace River.
	Per cent.	*Per cent.*	*Per cent.*
Water	6.52	12.37	2.10
Volatile combustible	31.03	32.33	21.54
Fixed carbon	56.54	46.39	71.63
Ash	5.91	8.91	4.73

Dr. George M. Dawson, of the Geological Survey Department, gives the following estimate of the extent of the coal area of British Possessions on the Pacific coast:

	Square miles.
Nanaimo coal basis (coals), approximately correct	200
Comax coal basis (coals), rough approximation	700
Queen Charlottes Island, very rough approximation	800
Tertiary lignite-bearing rocks in different parts of British Columbia south of the fifty-fourth parallel of latitude (very rough approximation)	12,000

The character of the coal is evidenced by the following analysis:

	Slow coking.	Fast coking.
	Per cent.	*Per cent.*
Water	1.47	1.47
Volatile combustible	28.19	32.69
Fixed carbon	64.05	59.55
Ash	6.29	6.29

Anthracite in 3-feet and 6-feet seams has been found in Queen Charlottes Island.

Samples analyzed give the following results:

	Sample 1.	Sample 2.
	Per cent.	*Per cent.*
Water	1.60	7.89
Volatile combustible	5.02	4.77
Fixed carbon	83.09	85.76
Ash	8.76	6.69
Sulphur	1.53	.89

Gas coke, for use in Canadian manufactures only, is admitted free of duty. The importation from the United States in 1899 amounted to about 140,000 tons.

JOHN L. BITTINGER,
Consul-General.

MONTREAL, *April 14, 1900.*

QUEBEC.

COATICOOK.

After a diligent investigation, I find that about 2,000 tons of anthracite and about 1,500 tons of bituminous coal were consumed here last year. All of the anthracite and about one-tenth of the bituminous came from the mines in Pennsylvania; nine-tenths of the bituminous came from Nova Scotia, all being transported by railroad. The anthracite costs the dealer $6.50 per ton, including freight. The bituminous costs the dealer $4.50 per ton. There are no coal mines in my consular district, and I know of no anthracite coal mines in Canada. United States coal is preferred, the demand having increased 20 per cent per year for the last three years.

J. H. JOHNSON, *Consul.*

COATICOOK, *March 29, 1900.*

GASPÉ BASIN.

American anthracite coal is used in this consular district only to a limited extent. Six hundred tons were consumed here during the past year, selling at from $6.50 to $7.00 per ton. It is kept in stock mostly for American yachts that call into this port, and for one of the Dominion steamers that is stationed at the mouth of the Gulf of St. Lawrence, looking after smugglers. From 1,200 to 1,500 tons of soft coal are used here annually. It comes from the mines at Pictou and Sydney, Nova Scotia, and costs, delivered here, about $3.50 per ton. I may mention that about all of the steamers of any size go the mines at Pictou and Sydney to coal, as it is only 190 miles from here to Pictou, and 235 to Sydney.

ALMAR F. DICKSON, *Consul.*

GASPÉ BASIN, *March 31, 1900.*

QUEBEC.

This market was supplied with coal in 1899 from the following countries:

	Tons.
Great Britain: Bituminous	5,228
United States:	
Bituminous	1,210
Anthracite	41,612
Nova Scotia: Bituminous	85,000

The wholesale price last year was $3.50 per ton for bituminous and $5.50 for anthracite, but I am informed by one of the largest dealers that it will be more this year.

The shipments from Nova Scotia came here by boat, but I learn the Intercolonial Railroad brings quite a quantity, which is landed at Levis, on the south side of the St. Lawrence River, of which our dealers have no record. The coal from the United States is shipped here mostly in canal barges, via Lake Champlain, river Sorel, and the St. Lawrence, the boats getting a return cargo of lumber, railroad ties, shingles, pulp, and pulp wood. There are no coal mines in the Province of Quebec.

Coal from the United States gives good satisfaction.

The duty from England is 53 cents per ton (of 2,000 pounds), and from the United States 53 cents on bituminous; anthracite is free.

WM. W. HENRY, *Consul.*

QUEBEC, *March 27, 1900.*

RIMOUSKI.

This consular district is a wooded country, and very little coal is used except by the railroad. The Intercolonial Railway runs the whole length of the district and has branches to the coal mines in

Nova Scotia. Bituminous coal is delivered at the station here in carload lots for $3.75 per ton. A few carloads of anthracite are used. It costs over $7.00 per ton in car lots. This is the only American coal that is sold or could be sold in this market, and the sale can not be increased.

CHARLES A. BOARDMAN,
Commercial Agent.

RIMOUSKI, *April 20, 1900.*

SHERBROOKE.

The greater portion of the hard coal in use here comes from Pennsylvania, and is now worth from $5.50 to $6.50 per ton. The coal used for manufacturing purposes comes from Cape Breton and is bituminous; it sells at from $3.75 to $4.75 per ton. The total yearly consumption of coal at this port is estimated at 4,500 tons of hard coal and 7,500 tons of bituminous coal. American coal is used almost entirely in the houses, and it is very satisfactory. There is no duty on hard coal, but a tax of 60 cents per ton (of 2,240 pounds) on bituminous. This duty and the higher freight rates on American bituminous coal prevent its coming here, and cause the preference to be given to the Cape Breton coal. A small quantity of American bituminous coal is used for blacksmithing purposes.

PAUL LANG, *Consul.*

SHERBROOKE, *March 28, 1900.*

STANBRIDGE.

The consular district of Stanbridge, Province of Quebec, embraces the counties of Missisquoi, Broome, Fouchault, and Iberville, having two railroad outlets—the Central Vermont and the Canadian Pacific—and bordering on Lake Champlain and the River Richelieu, which empties into the St. Lawrence River. Owing to the large forests which exist in the eastern part of my district, as well as the abundance of coal supplied by the mines of Pictou, Nova Scotia, there is little or no demand for United States coal.

During the year 1899, there was imported into this district about 1,500 tons of American anthracite, 300 of which a company at Bedford used in the manufacture of farming implements; the price commanded was $5.50 per ton.

The transportation facilities are via the Vermont Central Railroad from St. Albans, Vt., and by boats coming from Rouses Point, N. Y., to Phillipsburg, La Colle, and Sabrevois, in this Province; these return to the United States laden with hay.

There is a duty of 53 cents per ton (of 2,000 pounds) imposed by the Canadian Government.

In the rest of the Province of Quebec, imports of our coal are steadily on the increase. Contracts, I understand, have been made for the purchase of American coal, to be shipped from Rouses Point, N. Y., to points on Lake Champlain and the River Richelieu on the Canadian side, this coming season; the quantity I am unable to ascertain.

The circular of the Department on the scarcity of coal in Europe and the demand for American coal has brought out the following remarks from a prominent Canadian paper:

> Now, if it is profitable to ship American coal to Europe, why should not Nova Scotia coal find a market there? Large quantities of Cape Breton coal are sold in New England in competition with American coal, and Cape Breton is very much nearer to Europe than any port of the United States; nor is Cape Breton the only part of Nova Scotia where there are immense deposits of coal. There are great fields in Pictou County, Cumberland County, and other sections. If the scarcity of coal in Europe should be permanent, there ought to be great opportunities for capitalists in developing coal mining in that Province. The seams are of extraordinary thickness, and Cape Breton alone has coal enough to supply all Europe for many years.

FELIX S. S. JOHNSON,
Commercial Agent.

STANBRIDGE, *March 27, 1900.*

SUPPLEMENTAL.

I have to report the first direct shipment of bituminous coal from the United States into this consular district. The amount imported was 25 tons; place of shipment, Philadelphia; freight charges were $73.14, and customs duties $14.50. This coal is to be used for blacksmithing, and, if found to be superior to Canadian coal, more shipments will follow.

FELIX S. S. JOHNSON,
Commercial Agent.

STANBRIDGE, *June 11, 1900.*

IMPORTS OF UNITED STATES COAL.

I have again to report the arrival of 2 carloads of coal from the United States, to be used for manufacturing purposes in the town of Bedford. These shipments are indirect; the coal, which is anthracite, being brought from the Pennsylvania mines in cars to Lake Champlain, where it is transferred to boats and consigned to local dealers at St. Johns, Quebec, at which place it is reloaded in cars and conveyed to

Bedford, thereby obliging the purchasers to pay the railroad transportation from St. Johns to Bedford as well the profits of the local dealers.

For those desirous of extending their coal trade in the Dominion—which can be done without much trouble—I would suggest that they supply the various consular officers of the United States in Canada with the price of coal landed in each and every consular district, including all costs, such as freight, customs, etc. Thus, when called upon by manufacturers and others, the consul would be in a position to quote prices.

In regard to my consular district, shipments could be made to Lake Champlain, thence by boats to Phillipsburg, Clarenceville, or La Colle; this may also apply to shipments to St. Johns, Quebec, Montreal, and Three Rivers.

FELIX S. S. JOHNSON,
Commercial Agent.

STANBRIDGE, *June 28, 1900.*

ONTARIO.

AMHERSTBURG.

United States coal is used exclusively in this district, and nearly all the coal consumed is imported at this port. In the eastern part of the district, natural gas is the chief fuel in the towns. There was imported at the port of Amherstburg, in 1899, 15,000 net tons of anthracite, which was sold to the consumer at $6 per ton; and 55,785 tons of bituminous, used largely for coaling steam vessels, selling at $2.25 per ton.

CHESTER W. MARTIN.

AMHERSTBURG, *March 22,1900.*

SUPPLEMENTAL.

Mr. Martin adds, under date of April 3, 1900:

Since reporting in regard to bituminous coal, the price has been fixed at $3 per ton for steam vessels at this port, an advance of 75 cents per ton over last year.

BROCKVILLE.

All the coal used in the Brockville district is imported from the United States.

The value of importations for the year ended June 30, 1898, was: Bituminous, $384,615; anthracite, $84,033. For the year ended June

30, 1899: Bituminous, $249,716, a decrease of $134,935; of anthracite, $119,915, an increase of $35,882.

The bituminous coal all comes from the Reynoldsville district, the anthracite from the Scranton district. The bituminous coal retails at $3.50 a ton, the anthracite at $5.50. The factories use largely anthracite screenings at $2 a ton.

The Grand Trunk Railway uses annually at Brockville about 24,000 tons of bituminous, and the Canadian Pacific Railway from 45,000 to 75,000 tons. The supply is now very short. There are no Canadian coal mines nearer than Nova Scotia.

CHARLES W. MERRIMAN, *Consul.*

BROCKVILLE, *March 22, 1890.*

FORT ERIE.

All coal used in this district comes from the United States, by way of Buffalo, N. Y.

The Grand Trunk Railroad consumes about 1,000 tons of bituminous coal per day, and other roads about 400 tons.

Some residents use anthracite coal, but the majority employ natural gas.

There are no coal mines in this district, and the few factories use water power.

Anthracite coal enters free, while the tariff on bituminous coal is 53 cents per ton (of 2,000 lbs.).

OSSIAN BEDELL, *Consul.*

FORT ERIE, *March 24, 1900.*

GUELPH.

All the coal consumed in this district is imported from the United States, and is either Pennsylvania or Ohio coal. The supply equals the demand in all respects. I append figures received from the Canadian customs office at this port, of imports for the eight months ended February 28, 1900.

Imports.	Tons.	Value.
Coal, bituminous:		
July, 1899	523	$1,021
August, 1899	2,497¼	4,182
September, 1899	1,270¾	2,229
October, 1899	1,430¼	2,557
November, 1899	1,578¾	2,886
December, 1899	1,708½	3,143
January, 1900	2,319¾	4,976
February, 1900	2,414¾	4,292
Total	13,743	25,286

Imports.	Tons.	Value.
Coal, anthracite:		
July, 1899	1,135¼	$4,259
August, 1899	1,812¼	6,172
September, 1899	1,701	6,089
October, 1899	1,019¾	4,509
November, 1899	1,314¼	5,203
December, 1899	2,131¾	8,572
January, 1900	986¼	8,944
February, 1900	1,110¼	4,697
Total	11,210¾	43,445
Coal dust:		
July, 1899	118	42
August, 1899	59	6
September, 1899	63	22
October, 1899	39½	4
November, 1899	93	12
December, 1899	111¼	29
January, 1900	47	5
February, 1900	19	2
Total	549¾	122
Grand total	25,503¼	68,853

CHARLES N. DALY, *Consul.*

GUELPH, *April 3, 1900.*

HAMILTON.

The annual consumption of coal in this city, exclusive of that used by railroads and steamboats, is estimated at 56,000 tons of anthracite and 18,000 tons of bituminous.

Anthracite coal is free, while there is a duty on bituminous slack of 20 per cent—not to exceed 13 cents per ton of 2,000 pounds—and on bituminous round and run of mine of 53 cents per ton of 2,000 pounds.

All coal used here and throughout Ontario is imported from the United States, as freight charges from the maritime provinces and the Northwest Territory are practically prohibitory west of Kingston and east of Manitoba.

The successful operation of the Cataract Power Company in transmitting electric power from Decew Falls, a distance of 24 miles, and its general introduction among the manufactories promises to very materially reduce coal consumption during the present year.

JAS. M. SHEPARD, *Consul.*

HAMILTON, *March 22, 1900.*

KINGSTON.

The amount ot coal used in this district is 54,000 tons of anthracite and 31,000 tons of bituminous per annum. All is imported from the United States by way of Lake Ontario ports; Oswego, Rochester, and Sodus.

There are no coal mines in this district, and no coal is exported.

Transportation from American ports is very inexpensive, averaging during the season about 25 cents per ton.

Wholesale price of anthracite coal in Kingston is $5 per ton of 2,000 pounds; of bituminous, $3.50 per ton of 2,000 pounds.

M. H. TWITCHELL, *Consul.*

KINGSTON, *March 23, 1900.*

NIAGARA FALLS.

This consular district depends entirely upon the United States for its coal supply. Both anthracite and bituminous are used. Owing to proximity to the United States and free entry into Canada, the anthracite coal sells for about the same as similar grades in the States along the border line. During the past season, ton lots have sold for $5.75, but ordinarily the prices are from 18 to 22 per cent lower than this rate.

All grades of bituminous are used, and car lots are sometimes sold as low as $2.50 to $2.60 per ton. The present rate is about $2.90 per ton, f. o. b. factory or delivery point.

The quantity entered at this port for the year 1899 was 103,005 tons of bituminous coal, valued at $165,179; and 54,996 tons of anthracite coal, valued at $218,929.

The transportation facilities are excellent, by rail and lake and Welland Canal. There are no local coal mines, and consumption is increasing annually.

HARLAN W. BRUSH, *Consul.*

NIAGARA FALLS, *April 2, 1900.*

ORILLIA.

The demand for imported coal in this consular district is at present quite extensive, amounting, I think, to about 100,000 tons annually.

The demand is increasing and will continue to grow, owing to the very material advance in the cost of wood for fuel.

Both anthracite and bituminous are used. In anthracite, the egg, stove, and nut coal are used. In bituminous, lump, slack, and mine run. Anthracite retails from $6.50 to $7 per short ton, and bituminous for $3.75 to $4.50.

The entire supply is imported from the Pennsylvania coal districts, with the exception of about 15,000 tons of bituminous coal, which are obtained from the Nova Scotia coal fields and are used by the Canadian Pacific Railway, on the North Bay division of that road.

United States coal is preferable, having fewer clinkers and other impurities, but the duty of 53 cents per ton of 2,000 pounds is in this particular instance sufficient to make Nova Scotia coal considerably cheaper, delivered at North Bay.

All the coal used locally comes by vessel to Toronto, thence by rail to consumers. The Georgian Bay ports obtain their supply by water direct.

E. A. WAKEFIELD,
Commercial Agent.

ORILLIA, *June 1, 1900.*

PORT HOPE.

All the coal consumed in this consular district comes from the United States, and the quantity will continue to increase as the forests are cut away. Many farmers are using coal, their "bush" being wholly exhausted.

A careful estimate of the quantity of coal consumed the past year shows 47,200 tons of anthracite and 11,000 tons bituminous, which is rather above the average. The average price per ton is $6.25 for hard coal and $3.65 for soft coal.

American coal gives good satisfaction.

Sample shipments of peat manufactured for fuel have been tried in several sections of this district, but the majority of those using it are not favorably impressed, further improvement in the machinery for its manufacture being necessary to more fully extract the moisture. Claims are made that plans for this purpose are nearly completed, and when this is done and the system of canals on which the peat works are located are completed, peat fuel will enter into competition with American coal in the inland and many lake cities and towns of the Province of Ontario.

HARRY P. DILL,
Commercial Agent.

PORT HOPE, *May 8, 1900.*

SAULT STE. MARIE.

All the coal used in this district comes from United States lake ports. There is no other available source of supply.

There were 22,160 tons of bituminous and 3,841 tons of anthracite coal imported from these ports during the calendar year 1899

The building of the Algoma Central Railroad and other industries at this place will require an increased supply for the future.

GEO. W. SHOTTS,
Commercial Agent.

SAULT STE. MARIE, *March 26, 1900.*

STRATFORD.

All coal, both anthracite and bituminous, consumed in this consular district is imported from the United States. The statistics of the Canadian custom-house at Stratford show that during the year 1899, 20,525 tons of anthracite and 13,126 tons of bituminous coal were imported from the mines of Pennsylvania and Ohio. The anthracite is admitted free of duty, but upon the bituminous the duty is 53 cents a ton of 2,000 pounds. The average retail price is $6 a ton for anthracite, while manufacturing establishments pay, on average, $4.50 for bituminous.

A. G. SEYFERT, *Consul.*

STRATFORD, *March 23, 1900.*

NEW BRUNSWICK.

CAMPBELLTON.

There is but a limited demand for coal of any kind in this consular district, due the fact that, practically speaking, there are no industries other than lumbering and fishing. The sawmills use the waste ends and sides of logs and lumber as fuel for operative purposes. Also, very little coal is used for household purposes, either for heating or cooking, as wood, taking the year through, is considered cheaper. Sawmill waste is universally used for cooking purposes, and can be had at the rate of 40 cents per cart load of something over half a cord.

The electric power plant of Campbellton consumes about 450 tons of bituminous coal per year.

The total estimated consumption of coal in this district for the year 1899 is as follows: Bituminous coal, 2,300 tons; retail price, $5 to $5.75 per ton; anthracite, 600 tons, costing $6.50 to $7.

The two coals above mentioned are the only kinds especially required, the bituminous coal being procured from the mines of Nova Scotia and the anthracite from the State of Pennsylvania.

The transportation facilities are good, both by land and water.

There are no coal mines in operation in this consular district.

JAS. S. BENEDICT,
Commercial Agent.

CAMPBELLTON, *May 4, 1900.*

MONCTON.

It seems that there is not a very great demand for imported coal in this consular district. The drawback to the consumption of coal here is the vast amount of wood consumed. The country is well wooded, and during the winter months a vast quantity of cord wood is brought into the cities and towns both by vehicle and rail, and this is used for domestic as well as factory purposes. On this account, the demand for coal is much lessened.

There is a limited demand for anthracite coal for domestic purposes. The total consumption amounts to about 110,000 tons of bituminous coal (of which the Intercolonial Railway, with headquarters here, alone uses 27,000 tons) and 2,800 tons of anthracite coal per annum. The kind and qualities which are especially needed are: Bituminous—run of mine, for steam purposes; round and screened, for house use; slack, for blacksmiths and for pulp mills (of which there are two in this consular district). Anthracite—furnace, egg, stove, and chestnut.

The prices of bituminous coal range at the mines from $1 for slack; $1.65 for run of mines, to $2.40 for best screened per ton of 2,240 pounds.

The retail prices are as follows: Bituminous coal, screened, from $3.50 to $4.50; run of mine, $3.25 to $3.75; slack, $2 to $2.75; anthracite coal, from $5.25 to $5.75 per ton of 2,000 pounds.

The sources from which the present coal supply is obtained are Spring Hill, Pictou, Joggins mines, and Cape Breton, Nova Scotia.

United States coal is already being used, but to a limited extent. There has never been any bituminous coal imported from the United States, and not exceeding 2,800 tons of anthracite in one year. This is principally in egg and stove sizes.

The bituminous coals from Spring Hill and Pictou, Nova Scotia, are principally used for steam making, the latter having the preference, though both give excellent satisfaction; but for domestic purposes, the coal from the old Sydney mine of Cape Breton, Nova Scotia, is preferred.

There is one coal mine run by the Cannel Coal Company in this consular district, though the output will not be used for home consumption.

In regard to the exportation of coal to the United States, I have been informed that it is sent from Nova Scotia to Boston, though I could not find out to what extent.

In reference to the scarcity of supply and its probable duration, I have been informed that at certain seasons of the year the mines are heavily taxed, but a sufficient quantity is always available.

The United States coal used here appears to give entire satisfaction, in fact, I have never heard of any complaint, but on the contrary people who are using our coal are delighted with it and would not use any other kind. They also realize that it is almost as cheap as their home coal, on account of there being no waste.

The great obstacle to our coal trade is the Canadian tariff, and while it exists I can not see that the product will find a better market here.

The duty is as follows: Bituminous coal, round and run of mines, pays 53 cents per ton of 2,000 pounds, or 60 cents per ton of 2,240 pounds; slack pays 13 cents per ton. Anthracite coal is admitted free of duty.

Coal from the United States is imported in schooners, coming here for lumber and plaster rock, from May 1 to January 1. Freight is from $1 to $1.30 per ton, 2,240 pounds.

The freight on Canadian coal from Cape Breton and Pictou, by vessel, to this consular district, is from 80 cents to $1.25 per ton. Railway freight from Spring Hill, Nova Scotia, to Moncton, a distance of 65 miles, is 80 cents per ton, 2,240 pounds. From Cape Breton, Nova Scotia, to Moncton, a distance of 331 miles, is $2 per ton, 2,240 pounds.

GUSTAVE BEUTELSPACHER,
Commercial Agent.

MONCTON, *March 27, 1900.*

ST. JOHN.

The amount and value of coal imported into this port for the year ended June 30, 1899, were: Anthracite coal from the United States, 48,991 tons, valued at $150,812, upon which there is no duty; bituminous coal from the United States, 60 tons, valued at $124, upon which a duty of 53 cents for each 2,000 pounds is collected.

The quantity and value of coal imported from the United States into the Dominion of Canada for the same period were: Anthracite, 1,745,332 tons, valued at $6,490,147; Bituminous, 2,123,112 tons, valued at $3,609,389. For the six months ended December 31, 1899, Anthracite, to the amount of 2,658,299 tons, valued at $7,938,460.

There was exported to the United States from Canada for the last six months: Bituminous coal, 568,059 tons, valued at $1,559,184.

The coal from the United States is shipped from Philadelphia, New York, and Boston, and gives entire satisfaction. It is mostly nut size, which retails in this market at $5.25 to $5.50 per ton of 2,000 pounds. Bituminous coal sells at $4.25 to $4.65.

The bituminous coal for this market is shipped from Cape Breton, Nova Scotia.

There is no coal mine in this district.

The freight on coal from Philadelphia is about 80 cents, and from New York, 75 cents per ton, in schooners.

IRA B. MYERS, *Consul.*

ST. JOHN, *March 26, 1900.*

ST. STEPHEN.

Owing to the liability of the St. Croix River being closed to navigation by ice during the winter months, dealers in coal usually land enough in the early fall to last until spring. For this reason, this report covers the importation of coal for the year ended December 31, 1899.

The total importation of coal into this consular district for the above period was 34,153 tons; of this amount 5,439 tons was anthracite, all coming from the United States. As future importations will be from the same source, no figures are given as to the freight rates, nor price to consumers. The price in the markets of the United States governs the price here.

Twenty-eight thousand seven hundred and fourteen tons of bituminous coal were landed in this district during the year 1899; 171 tons of this came from the United States, the balance (28,543 tons) was the product of the Nova Scotia mines.

Transportation is by barges towed by tugs and sailing vessels, except that most of this coal used by the Canadian Pacific Railroad is brought in on its own trains. Freight by barge and vessel averages 65 cents per ton at dock. The price to consumers was $2.90 per ton for "run of the mine," and $2.10 per ton for "culm," each at dock. The price of coal will be higher the coming season, largely due to increased freight rates. One of the largest consumers has just closed a contract for this season's delivery (6,000 tons), at an advance of 60 cents per ton over that of 1899.

The consumption of coal both for heating and steaming purposes is on the increase here, many industries formerly using wood for fuel adapting their furnaces to coal burning.

CHARLES A. McCULLOUGH, *Consul.*

ST. STEPHEN, *April 7, 1900.*

WOODSTOCK.

The consumption of coal in this district is limited, as this is a wood country. A small amount is imported. United States hard coal is shipped by water to St. Stephen or St. John and dealers buy supplies there.

A small quantity of soft coal is also brought in from the eastern provinces. American stove coal (hard) retails at about $6.50 per net ton.

FRANK C. DENISON, *Consul.*

WOODSTOCK, *April 9, 1900.*

NEWFOUNDLAND.

Last year witnessed the first actual bona-fide attempt at coal mining in Newfoundland. Some 2,900 tons were taken out, all being used on the locomotives of the Newfoundland railway.

The total imports of coal for the fiscal year ended June 30, 1899, were as follows, viz: United Kingdom, 12,070 tons; Canada, 81,671 tons; United States, 5,839 tons.

No coal except anthracite comes to this market from the United States; this coal is permanently established and its use is increasing. British war ships use only the best grade of Welsh coal, which at the present time costs in Wales $5.50 per ton. Previous to the South African war, this coal was bought for $3.50 per ton. The present selling price in St. Johns is $8.50 per ton. On account of the high price, there is very little of the best grade of Welsh coal sold in this market, except what British war vessels take, which amounts to about 4,000 tons annually. French war ships use a cheap grade of Cape Breton coal. Merchant and tramp vessels all use Cape Breton coal.

The present cost price of Cape Breton coal is $2.60 to $2.90 per ton, and it retails in St. Johns from $5.50 to $6 per ton.

Freight rates on coal from England average $2 per ton; Cape Breton, $1.25 per ton; United States, $1.50 per ton. Coal is duty free, except a city tax of 50 cents per ton, which is charged on coal coming from any country.

MARTIN J. CARTER, *Consul.*

ST. JOHNS, *May 1, 1900.*

NOVA SCOTIA.

HALIFAX.

The tables of navigation of the Dominion of Canada for the fiscal year ended June 30, 1899, show total importation into the Dominion of anthracite coal to have been 1,745,460 tons, of the value of $6,490,509. All but 128 tons of this amount came from the United States.

The importation of bituminous coal is stated in the same tables to have been 2,171,358 tons, of the value of $3,691,946, of which 36,341 tons came from Great Britain and 2,135,005 tons from the United States.

The Statistical Yearbook of Canada gives the entire production of coal throughout the Dominion for the calendar year 1898 as 4,181,597 tons, of which total 2,563,180 tons are credited to Nova Scotia, 1,272,169 tons to British Columbia, 340,088 tons to Manitoba and Territories, and 6,160 tons to New Brunswick. These figures include colliery consumption as well as sales.

The prices of bituminous coal in Halifax are $3.50 for steam or bunker, $3.75 for screened, and $2.75 for slack, per ton of 2,240 pounds.

The cost of transportation from the mines to Halifax is from 80 cents to $1 per ton, and the cost of transportation from the mines of Cape Breton to Boston is about the same.

Anthracite coal imported from the United States is sold in Halifax at about $5 per ton.

The prices of bituminous coal above quoted are about 75 cents per ton higher than those prevailing during the year 1899.

The inspector of mines for the Province of Nova Scotia has recently made a report upon the Nova Scotia coal fields, from which I quote:

> The first to be noticed is the Sydney coal field, on the east shore of Cape Breton. Its area of available coal is estimated at over 500 square miles. It contains 12 seams, from 3 to 12 feet in thickness. The coals are highly bituminous and adapted for coke and gas making. It is classified for steam purposes as superior to Newcastle and nearly equal to the best Welsh steam coal. Some of the beds enjoy a special reputation as domestic coals. The following analysis will show the general character of these seams:

Moisture	1.260
Volatile combustible matter	35.514
Fixed carbon	59.411
Ash	4.115
Sulphur	.850

> Coal is also found in other parts of the island of Cape Breton. Hitherto, the collieries opened in the Sydney district have been sufficient to meet the demands of the trade. Now that the trade of the province is rapidly expanding, the deposits at other points are being opened up. At Loch Lomond and at River Inhabitants, coal seams are known to outcrop, but as yet they have not been opened up. At Port Hood, Mabou, Broad Cove, and Chimney Corner there are extensive deposits of large seams of good quality. The construction of a railway has been commenced, to run from the Strait of Canso to the northern end of the island, through the four districts I have mentioned. Collieries are being opened at Mabou and at Broad Cove, and it is anticipated that their favorable position will give them command of the coal trade of the gulf and river of St. Lawrence. The coal in these districts is similar in quality to that found on the opposite or eastern side of the island, being of a bituminous and coking character.
>
> Passing to the mainland, coal occurs at Pomquet and Hallowell Grant. The first district that is worked on the mainland is known as the Pictou coal field. This district covers an area of about 35 square miles, and is noted for the unusual development of some of its beds. There are 16 seams known, from 3 to 34 feet in thickness. The coal is not as bituminous as that from the Sydney coal field, but is still a coking coal, except in the case of a few seams. The coal from this district is used at the iron furnaces at Londonderry and Ferrona, and has a good reputation for steam purposes. The Cumberland coal field has not yet been explored over all its area, which is estimated at 400 square miles. Operations have been hitherto practically confined to Springhill and Joggins. At the former place there are 7 seams, from 3 to 12 feet in thickness, 3 of which are extensively worked. The coal is similar in character to that from the Pictou district, and is largely used on the Grand Trunk, Canadian Pacific, and other railways.

Coal is known in Colchester, Hants, and Antigonish counties, but no attention has yet been paid to it.

The foregoing shows that there is a large supply of coal available in the province and that the different qualities are suited for almost every domestic and industrial use.

The coal from all the districts of the province is suitable for iron and steel making, as it forms a strong and pure coke. The coke from some seams is in quality fully equal to that of the best Connellsville coke, which is taken as the standard in the United States.

The annual production of coal in the province is steadily increasing. Home consumption is large and will be greatly increased upon the completion of the large iron and steel works being built at Sydney. In spite of the duty placed on coal by the United States, large amounts are sent to Boston and adjoining towns. The coal exported to the United States is used principally for making gas in closed ovens, with the coke, ammonia salts, etc., by-products.

The following table will serve to show the sales for the year 1899 and their distribution:

	Tons.
Coal produced in—	
Cumberland	406,278
Pictou	409,840
Cape Breton	1,591,583
Other counties	11,428
Total amount of coal sold	2,419,137
Distributed in—	
Province of Nova Scotia	729,477
Province of New Brunswick	327,504
Province of Prince Edward Island	66,881
Province of Quebec	1,029,288
Newfoundland	106,755
West Indies	6,044
United States	153,188
Total amount distributed as above	2,419,137

JOHN G. FOSTER, *Consul-General.*

HALIFAX, *May, 1900.*

SYDNEY.

This section of Nova Scotia is a large producer of bituminous coal. A small quantity of anthracite coal (brought here in small Canadian sailing vessels trading to the United States) is used in private houses, but the amount will not exceed 500 tons per annum in Sydney and North Sydney.

From the island of Cape Breton, especially the ports of Sydney, North Sydney, and Louisburg, large quantities of bituminous coal are shipped each year to other ports of the Dominion of Canada, Newfoundland, the French islands off Newfoundland, and the United States, the shipments to the latter being principally to ports in Massachusetts, Maine, and New Hampshire.

The coal consumed in this district, except the amount of anthracite above noted, is produced from the mines in Cape Breton Island. The prices for the best quality of broken, screened, or run of the mine, free from slate or stone, have ranged from $1.80 to $2 per ton; for culm or slack coal, from 80 cents to $1 per ton. During the last few months there has been an increase in price, but to what extent for large quantities I am not informed. The retail price is $2.70 to $3 per ton for the best large coal.

The Dominion Coal Company, Limited, produced, at various mines located within a radius of 16 miles of Sydney, and shipped during the calendar year 1899 nearly 1,750,000 tons of bituminous coal. Of this amount, about 274,000 tons were sent to the United States. During the present year this amount will be very largely increased, and will closely approximate 1,000,000 tons of steam and culm or slack coal combined. The largest consumers in the United States of coal shipped from here are the Boston and Maine and Grand Trunk railroads for steam coal, and the New England Gas and Coke Company, Limited, at Everett, Mass., for the culm or slack coal. New mines of bituminous coal are now being opened up on the northwest coast of the island, near Port Hood, and have transportation by rail to safe harbors on the Strait of Canso, between 35 and 40 miles distant; these will have an estimated output of 200,000 tons this year. The mines of Burchell Brothers, at New Campbellton, and the General Mining Association Mines, near North Sydney, will have an output estimated at between 500 000 and 600,000 tons this year. Large areas of land on which valuable seams of coal are located have been bonded on the island, and companies are being formed for their development. All of the mines now in operation are sinking new shafts or pits to meet the increased demand for coal, and before the close of the present year it is believed the force employed will be increased by at least 4,000 miners.

The marketable output of bituminous coal from the mines of Cape Breton Island will, during this calendar year, approximate between 2,500,000 and 3,000,000 tons in excess of local needs.

Therefore at present, and for many years to come, this section of Nova Scotia will, instead of being a purchaser of coal, except for small quantities of anthracite, be an active competitor in the markets of the world with the coal from the United States.

GEORGE N. WEST, *Consul.*

SYDNEY, *March 30, 1900.*

WINDSOR.

The coal areas of Nova Scotia cover about 635 square miles. They are divided into the Cape Breton, Pictou, and Cumberland basins. The coal veins of Cape Breton average from 25 to 60 feet in thickness; of

Pictou, 70 feet, and of Cumberland at least 30 feet. The workable area of coal in Nova Scotia is estimated to contain 7,000,000,000 tons. Nova Scotia produces more coal than any other Province of the Dominion of Canada.

The sales of coal during the year 1899, compared with those of 1898, were as follows:

To—	1898.	1899.
	Tons.	*Tons.*
Nova Scotia	667,252	729,477
New Brunswick	266,789	327,504
Prince Edward Island	93,241	106,755
Newfoundland	62,051	66,881
Quebec	944,160	1,029,288
West Indies		6,044
United States	98,027	153,088
Other countries	3,877	

Commenting upon these figures, the inspector of mines says: "There is an increase in sales to all points. The exports to the United States steadily increased during the summer [of 1899] and will be continued during the winter." Of the three counties composing this consular district, Kings and Hants produce no coal. Cumberland County, the third, includes the Cumberland coal basin before referred to, and furnishes the Joggins mines in the agency of River Hebert, and the Springhill mines in the agency of Parrsboro.

The aggregate output of these mines in the year 1899 was 437,121 tons, compared with 352,270 tons during the preceding year. Of this total, the Springhill mines furnished 369,533 tons and the Joggins mines 67,588 tons. The Joggins mines send none of their coal to the United States, but shipments are made from the Springhill mines. The sales of coal to the United States during the year 1899, as invoiced at the Parrsboro agency, amounted to $24,748.94. At the same port for the year 1898, the value of the coal shipped was $27,645.17.

While this shows a falling off of coal shipped to the United States from the Cumberland mines, the aggregate of Pictou and Cape Breton sales shows an increase. In regard to the increased coal shipments of Nova Scotia for the year 1900, the Maritime Mining Record for May 16 says:

> The high hopes entertained at the opening of the year that the coal sales for 1900 would largely discount the shipments of all previous years are likely to be more than realized. As indicative of what may be expected for the full year, it may be stated that the increased sales for the four months past show a gain over the same period of 1899 of no less than 300,000 tons, roughly estimated. The sales for four months only of 1900 are double the shipments of the whole of 1861, and are more than the total shipments of the year 1876. * * *
>
> Beginning with this year, Nova Scotians may confidently look forward to their Province increasing its coal sales at a ratio equal to that of a majority of coal-

producing countries. This year will be an eventful one in the history of the coal trade of the Province in more respects than one. It will be a record year as to total shipments, and it will also make a record in the shipments to the United States. This latter assertion is most significant, in view of the oft-repeated prediction of a certain "sect" in the land that Nova Scotia would never again send coal to the United States in quantity equal to that sent during the fat years of reciprocity. Indeed, there were certain persons ready to assert that Nova Scotia had sent its last cargo of coal there. In view of these predictions, it is consoling to note that in the four months of this year about half as much coal has been sent to the United States as during the busiest twelve months under the reciprocity treaty.

As showing the progress made at some of the collieries, we annex figures of the shipments for the past four months, compared with the shipments during the same months of 1899.

As the largest shipper, we take the Dominion Coal Company first:

Month.	Shipments, 1899.	Shipments, 1900.
	Tons.	*Tons.*
January	37,300	100,119
February	36,771	95,454
March	23,159	85,000
April	50,698	95,710
Total	147,928	376,283
		147,928
Increase 4 months 1900	....	228,355

The following shows the increased shipments of this company to the United States:

Month.	1899.	1900.
	Tons.	*Tons.*
January	8,463	58,750
February	15,242	69,285
March	5,369	52,827
April	20,565	51,359
Total	49,639	232,221
		49,639
Increase 4 months 1900	....	182,582

The shipments of the Intercolonial Coal Company were as follows:

Month.	1899.	1900.
	Tons.	*Tons.*
January	10,480	19,517
February	11,480	17,741
March	11,799	18,255
April	14,616	18,122
Total	48,375	73,635
		48,375
Increase 4 months 1900	....	25,260

The shipments from the Acadia mines for the same months were 66,828 tons in 1899 and 79,336 tons in 1900; increase, 4 months 1900, 12,508 tons.

The Cumberland Railway and Coal Company shipped for the four months of 1899, 117,002 tons. The shipments for this year are, for the same four months, 140,918 tons, an increase of 23,916.

The Canadian tariff on soft or bituminous coal is 53 cents per short ton, or 60 cents per long ton. Anthracite coal is on the free list, and large quantities are shipped to and consumed in this Province. No American soft coal is brought here.

The price of coal, retail, delivered at this port, is from $3.50 to $4 per ton; at the mines, wholesale, from $2.50 to $3 per ton. The quality of Nova Scotia coal is inferior to that produced in the mines of West Virginia; it is from 15 to 20 per cent less in value.

Since the 1st day of January, last, the price of coal at the Springhill mines has advanced 25 cents per ton, and an equal or greater advance in price has been made by the Dominion Coal Company. Miners' wages are less here than in the United States, but the coal companies pay to the Province a royalty or tax of 10 cents per ton on all coal sold by them. The Dominion Coal Company, on account of some additional corporate privileges granted, pays a royalty of 12½ cents per ton.

Proximity to the seaboard and cheap water transportation give the mines of Nova Scotia an advantage over most of the deposits of the Atlantic coast.

JOSEPH T. HOKE, *Consul.*

WINDSOR, *June 1, 1900.*

PRINCE EDWARD ISLAND.

The bituminous coal consumed on this island comes from the neighboring Province of Nova Scotia. It is estimated that 100,000 tons are consumed annually, costing, on an average, $3 per ton delivered. Anthracite coal is imported from New York in limited quantities for heating purposes, some preferring it to the bituminous. It is estimated that 10,000 tons are consumed annually, costing $4.50 delivered.

Transportation from New York by schooner costs $1 per ton.

I am confident that the market for anthracite for heating purposes will increase yearly.

DELMAR J. VAIL, *Consul.*

CHARLOTTETOWN, *March 24, 1900.*

MANITOBA.

There is a large and growing demand for United States coal in this consular district, especially in that part of the district which embraces Manitoba and western Ontario. The demand includes both anthracite and bituminous coals. There are in the extreme western and northern parts of the district very extensive coal deposits, estimated to cover an area of over 55,000 square miles, and yielding anthracite, bituminous, and lignite coals in almost inexhaustible quantities; but these fields are but little developed, and the coals, so far as tested, are not of the best quality. This fact, together with the long distance these coals have to be transported to a market, prevents them from coming into serious competition with our coals in the eastern part of the district. Anthracite coal and coke are admitted to the district free of duty, but bituminous coal is subject to a duty of 53 cents per ton of 2,000 pounds. The coal comes almost entirely from the States of Ohio and Pennsylvania, and is shipped by vessels across the Great Lakes and landed at Fort William, Ontario; Duluth, Minn., or West Superior, Wis., and thence sent by rail to place of consumption. The wholesale price at either of the ports mentioned is about $5.25 per ton for anthracite and $3 for bituminous, exclusive of duty.

The importations into the district for the year 1899 aggregated about 43,000 tons of anthracite and 225,000 tons of bituminous coal. The bituminous was entered largely at the port of Fort William, Ontario, and distributed east and west from that point by rail. Owing to heavy freight charges, a comparatively small part of it reached Winnipeg. The freight rate from Lake Superior ports to Winnipeg and adjacent territory, about 425 miles, is $3 per ton, and the firmness with which it is maintained indicates a perfect agreement between the two roads operating in this territory. About 500 tons of American coke were consumed in the district last year. There is a considerable export trade in coal and coke from the western part of the district to Montana, the amount exported last year being some 70,000 tons of coal and 2,000 tons of coke.

W. H. H. GRAHAM, *Consul.*

WINNIPEG, *March 28, 1900.*

BRITISH COLUMBIA.

The mining of coal is one of the chief industries of British Columbia, and especially of Vancouver Island, where extensive mines have been in operation for several years. They appear to be practically inexhaustible.

The total output of the coal mines of the Province of British Columbia for the year ended December 31, 1899, in tons of 2,240 pounds, was as follows:

Vancouver Island collieries	1,203,199
Crows Nest Pass collieries	103,124
Total output in Province	1,306,323

The total output of coke for the same period was:

Vancouver Island coke ovens	4,593
Crows Nest Pass coke ovens	29,658
Total output in Province	34,251

The exports of coal to the United States from this consular district during the same period reached 725,738 tons, of the value of $2,177,944, the larger part going direct to San Francisco and the remainder to Honolulu.

A small amount of Cumberland bituminous coal is imported from the United States, for use in blacksmiths' forges. The entire imports last year, however, did not reach the value of $100. The Canadian tariff on bituminous coal is 20 per cent.

There is no anthracite coal imported here, and people seem to be ignorant of its advantages. Owing to the mild winters in this section there are but few furnaces in use on Vancouver Island, and they are built to burn the coal produced in local mines. There is no tariff on anthracite coal.

Means of transportation are easy and cheap. Daily ferries run to Puget Sound cities, and every five days steamers arrive from and depart for San Francisco direct. Freights from Seattle and Tacoma to Victoria are nominal, the railroads transporting through freight to either point at equal rates.

There is no field here at present for United States or any other coal, save the output from local mines.

ABRAHAM E. SMITH, *Consul.*

VICTORIA, *May 3, 1900.*

MEXICO.

GENERAL REPORT.

There is a large demand for imported coal in this Republic and, as will be seen from the figures given below, the United States is now supplying by far the larger part of the coal brought into Mexico, the total consumption being fairly shown by the figures marked "Importations," as about all the coal mined here is for the use of the Southern Pacific Railway Company, is exported to the United States, and comes from Felipe, Hondo, and Fuenti in the State of Coahuila.

Year.	Country.	Importations into Mexico.	Exportations from Mexico.
		Tons.	*Tons.*
1896-97	United States	207,269	106,730
	England	115,622	None.
	Other sources	18,841	None.
1897-98	United States	291,847	117,046
	England	104,898	None.
	Other sources	81,887	None.
1898-99	United States	515,777	138,876
	England	135,865	None.
	Other sources	19,970	None.

Ton=2,000 pounds.

It is my opinion that most of the coal imported from England is known as the "Crown patent fuel" and the greater part is consumed by the Mexican, Interoceanic, and Mexican Southern railway companies. The kind and quality of coal especially needed and used is bituminous steam coal. A very little is used for heating or cooking; it is known as "Pocahontas," "McAlester, I. T.," "West Virginia," "Pennsylvania," "Alabama," "New Mexico," and "Texas" (mines near Laredo).

The present prices of screened lump coal, per ton of 2,240 pounds, free on board cars or vessels, in United States currency, at the various ports of entry are as follows:

El Paso	$5.00 to $6.25
Eagle Pass	5.00 to 5.25
Laredo	3.75 to 4.75
Tampico	4.50 to 5.00
Veracruz	4.75 to 5.25

The cause of scarcity is that about all of the coal mined here is exported to the United States, as explained above, and this condition will continue, no doubt, unless new deposits are discovered. Our coal is giving entire satisfaction, and, I may add, there is no duty on coal entering this Republic, but a brokerage charge of customs agents for "clearing" same of 10 cents, Mexican currency, per gross ton.

The transportation facilities are the best—Mexican Central Railroad from El Paso, Mexican International and Mexican Central railroads (combination) from Eagle Pass, Mexican National from Laredo, Mexican Central Railroad from Tampico, Mexican and Interoceanic railroads from Veracruz, with the Munson line with occasional chartered ships touching at Veracruz and Tampico, all to the City of Mexico. The freight rates are subject to change without notice, but through rates can be obtained on application to any of our trunk lines.

ANDREW D. BARLOW, *Consul-General.*

MEXICO, *April 6, 1900.*

CHIHUAHUA.

My consular district comprises the southern half of the State of Chihuahua.

There are no coal mines in the district. There are some indications or "prospects" of coal, but so far no practical results have been obtained. All the coal used in the district is bituminous, and comes from the United States—from New Mexico, Colorado, and Texas—by all-rail routes.

The quality appears to be satisfactory. This coal supplies the 500 miles of railroads in the district and several mining and manufacturing plants. I estimate the quantity consumed in the district at about

8,000 tons per month. This coal costs at Chihuahua $7.50 to $8 per ton, United States currency.

There is no import duty on coal, either national, State, or municipal.

This report is confined to this consular district.

W. W. MILLS, *Consul.*

CHIHUAHUA, *April 4, 1900.*

CIUDAD JUAREZ.

All the coal consumed in this consular district, and in fact in northern Mexico, is imported from the United States. Coal is not mined here, although deposits have been recently found in the State of Sonora—too far removed, however, from any line of transportation to be immediately developed.

Coal entering Mexico through the port of Ciudad Juarez is mined in the Territory of New Mexico and in western Texas. Occasionally there is a shipment from Colorado and from Indian Territory. The demand varies but slightly; the railroads, a few mining companies, a brewery, a foundry, and some minor industries, consume the total importation. The Mexican Central Railroad, terminating at this place, receives for its own use and for distribution along its northern division almost all the fuel entered at this port. Besides supplying its own engines, pumping stations, shops, etc., it distributes the coal to a foundry, a brewery, and other industries at Chihuahua and Parral. But none of the coal imported at this place is carried farther south than Jimenez, which is in the southern section of the State of Chihuahua. From Jimenez south to the City of Mexico, the coal distributed by the Mexican Central for its own and other purposes is imported at Tampico.

The Rio Grande, Sierra Madre and Pacific road, running from Ciudad Juarez 150 miles to the southwest, uses about one car of coal each day. Last January, this company imported 32 cars containing 760 tons, and during February, 29 cars containing 635 tons. The Mexican Central, for its own use and for distribution, imports approximately 50 cars per day.

The mines in New Mexico and western Texas have not always supplied the demand; and in that event coal has been shipped from McAlester, Ind. T., and sometimes from as far east as Memphis, Tenn. Recently, however, new mines have been opened in New Mexico 150 miles from El Paso, Tex., on the line of the El Paso and Northeastern Railroad. This fact will insure an increased supply that will keep pace with any demand that may be anticipated.

While the supply seems now to equal if it does not exceed the demand, high prices are still maintained. Mr. J. P. Ramsey, general manager of the Rio Grande, Sierre Madre and Pacific Railroad, states that his company pays $4.50 to $5 (United States currency) per ton for coal laid down at El Paso, Tex. There is no tariff duty on coal imported into Mexico; but consular papers, broker's fees, etc., add slightly to the cost per ton. Coal sells for domestic purposes in this city at $15 per ton, Mexican (about $7.04 gold).

All the coal imported at Ciudad Juarez is invoiced at the Mexican consulate at El Paso. I am indebted to Señor Don Francisco Mallen, Mexican consul at that place, for the following statistics of coal exportations for six months:

Months.	Tons.	Value.
September, 1899	3,170	$12,681.00
October, 1899	3,588	14,352.00
November, 1899	5,182	20,728.00
December, 1899	2,656	10,625.00
January, 1900	3,574	14,295.00
February, 1900	5,764	23,055.00
Total	23,934	95,736.00

CHARLES W. KINDRICK,
Consul.

CIUDAD JUAREZ, *April 15, 1900.*

CIUDAD PORFIRIO DIAZ.

There is practically no market for American coal in this district, coal mining being one of the chief industries here, and coal one of the chief exports to the United States.

The coal fields about Diaz are owned and operated by the Mexican International Railroad Company, and the amount exported yearly to the United States, until recently, was about 12,000 tons, but this has fallen off considerably in the past three months, owing to the opening of some mines just across the river in Texas, they being also owned and operated by the above-named company.

Instead of there being any scarcity of coal, the supply is constantly increasing, owing to the opening up of new mines, as at Baratàran and other places.

CHAS. P. SNYDER, *Consul.*

CIUDAD PORFIRIO DIAZ, *March 26, 1900.*

MONTEREY.

Upon investigation, it is learned from reliable authority that the most stringent efforts on the part of those interested failed to make the importation of coal from England, Germany, and Belgium a success, and that only United States coal is now used here. Cia. Minerva Fundidora y Afinadora "Monterey" imports Virginia Pocahontas coke, amounting to 25,000 tons annually, at a cost of $7 per ton f. o. b. on cars at Tampico, and 2,000 tons of coal from Laredo, Tex., at $2 per ton f. o. b. on railroad in Nuevo Laredo, Mexico. The treasurer of this company and one of the principal owners is Señor Juan Weber, with whom it is recommended prospective exporters of coal should correspond. "La Gran Fundicion Nacional Mexicana" is another large company which consumes quantities of American coal; the manager is Mr. H. M. Dieffenbach, with whom also exporters of all kinds of coal to this country should correspond. The same may be said of Col. J. R. Robertson, who is a large consumer of American coal, and is engaged in various important enterprises. The field being in the hands of United States coal dealers, it rests with those desiring to supply the demand to compete therefor, those furnishing the best and comparatively cheapest article being assured of success.

PHILIP C. HANNA,
Consul-General.

MONTEREY, *April 26, 1900.*

SALTILLO.

There is no demand at the present time for United States coal in this consular district. There are extensive coal mines in the northern part of this State (Coahuila), which supply all local demands for coal and coke. I am informed that there is also a surplus, which is exported to the United States. This is bituminous coal; no anthracite is used.

If further information is desired, I shall be pleased to furnish same on request.

CHAS. BURR TOWLE, *Consul.*

SALTILLO, *March 28, 1900.*

TAMPICO.

United States coal has no rival in the market of northern Mexico, only one cargo of English coal having come into this port since 1896.

The annual receipts are 265,000 tons of coal and 125,000 tons of coke, all of which, except 30,000 tons now coming from Pensacola, is shipped from Chesapeake Bay ports and Philadelphia.

Rates of freight vary from $1.50 to $2.50 per ton, but most of the steamers engaged in this trade are on time charters.

The principal consumer is the Mexican Central Railway, which receives annually 180,000 tons for its own account, and 85,000 tons for various enterprises along its line between here and Mexico City. The coke goes to the ore smelters in Monterey, Aguascalientes, and San Luis Potosi. The amount consumed in Tampico is so small as to be of no consequence.

SAML. E. MAGILL, *Consul.*

TAMPICO, *March 26, 1900.*

VERA CRUZ.

In former years, English coal was most appreciated in Mexico. It is still used by the Mexican navy and by the Vera Cruz Mexican Railroad, an English company, which employs the coal-dust bricks and so called patent fuel (Crown brand).

The other railroad companies and industrial concerns, with a few exceptions, are now using only United States coal. The steamers coming from Europe sell a few tons of bunker coal and coke for cotton mills.

All our coal imported here is from either Baltimore, Philadelphia, Norfolk, Newport News, or the Gulf ports.

Prices of coal fluctuate a great deal, as they depend not only upon the cost at the mines, but also on the freight, which is the largest item. A normal price for many months during last year at Atlantic ports was $1.50 to $1.80, free on board vessel. Freight for steamers of about 3,000 tons cargo, $2 to $2.50 to Vera Cruz.

I have to call attention to the fact that coal shippers as a rule do not take care to facilitate business for the Mexican buyers in giving cheap rates of freight, and they also assent to hampering conditions imposed by the owners of vessels, with respect to discharge and demurrage money. Therefore it has happened that the importers had to pay so many extra expenses that the expected profit was turned into a loss.

So far, the coals most imported here are the "Toms Creek," "Pocahontas," and "Cahaba" (Alabama) coal. Of late, many brands of coal have been introduced here successfully and the price of good American double screened coal in steamer cargoes of 2,000 to 3,000 tons is about $4.60 to $4.75, c. i. f. Vera Cruz. Coal from England costs about 5 to 8s. ($1.22 to $1.95) per ton of 2,200 pounds; freight is 10s. ($2.43) per ton. While in the smelting works of the interior both bituminous and anthracite coal are consumed, the railroads and factories prefer anthracite, buying bituminous, however, in case of need, or at lower prices. Railroad freight from Vera Cruz to the consuming points is between $5 and $11, Mexican silver ($2.34 and $5.15), per ton.

During the fiscal year of 1898–99, the total import of coal through the port of Vera Cruz was 88,230,984 kilos (194,514,027 pounds) from the United States, and 105,805,327 kilos (233,258,424 pounds) from England.

Wm. W. Canada, *Consul.*

Vera Cruz, *April 11, 1900.*

BRITISH HONDURAS.

There is so little consumption of coal in this colony that the market would of necessity be small, even if every ton came from the United States.

During the year 1899, the coal imported into British Honduras was entered as follows: From the United States, 640 tons; United Kingdom, 192 tons. This was entirely of the bituminous variety and was for the use of the one or two river steamers that are employed here and for the ice factory at Belize, the only manufacturing plant in the colony. Anthracite coal is not imported at all. The demand will probably be increased with the completion of the proposed railway, but until then the supplying of 800 tons per annum, of which over three-fourths already comes from the States, is hardly worth struggling for.

W. L. AVERY, *Consul.*

BELIZE, *April 2, 1900.*

GUATEMALA.

There is no demand here for United States coal.

The supply comes from British Colombia, and is a steam coal used almost exclusively for fuel on the railroads.

The amount of steam coal imported in 1899 was 121 tons, price f. o. b. in San Jose, the principal port of entry, $16.50 gold.[1]

The price of coke (used for smelting purposes) is $24.

Rumors of coal finds are numerous, but I have no knowledge of any developed mine.

JAMES C. MCNALLY,
Consul-General.

GUATEMALA, *April 27, 1900.*

SALVADOR.

Almost the only importations of coal into Salvador have been made by the Salvador Railway Company, which formerly used patent fuel for locomotives. The present management has abandoned this for wood, which is bought for less than $2 per cord. Lately, the company received a shipment of 650 tons of coal, which is to be held in reserve. The only other importer of coal is the firm of Melendez & McIntyre, who have a foundry in San Salvador; they import annually about 10 tons of coke from California.

Salvador has no coal mines in operation, though it is claimed that there is coal to be found.

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[1] Note by Bureau of Foreign Commerce.—The value is probably expressed in gold colons, equivalent in United States currency to 46.5 cents. This would make the price of coal per ton $7.67.

Other industries where steam is used find enough native material to supply the needed fuel, and wood is plentiful. Blacksmiths use charcoal in preference to coal, both on account of cheapness and results.

Many changes must take place before Salvador can be considered a market for foreign coals.

JOHN JENKINS, *Consul.*

SAN SALVADOR, *March 10, 1900.*

BRITISH WEST INDIES.

ANTIGUA.

No coal is used in this colony, except a few hundred tons in sugar manufacture and local smith work; a reserve is also held in stock for the convenience of tramp steamers which may reach here short of supplies. The total quantity does not exceed two or three hundred tons a year. It is the impression—the statistics not yet being issued—that no imports were made last year.

SAML. GALBRAITH, *Vice-Consul.*

ANTIGUA, *May 5, 1900.*

BAHAMAS.

There is a small but steady demand for coal in the Bahamas, the amount imported in 1898 being 2,228 tons, valued at $10,492.17. Of this quantity, about 250 tons were hard coal, the rest being soft or bituminous coal. It was imported from Hampton Roads, Virginia, and sold here at from $7 to $9 per ton, and was entirely satisfactory. It is known as Pocahontas coal.

There are no coal mines here, and no coal is exported. There is no duty on coal. It is imported in sailing vessels and is sold principally for coaling steamers. All the coal sold here comes from the United States, which will continue to supply the demand.

THOS. J. McLAIN, *Consul.*

NASSAU, *March 27, 1900.*

BERMUDA.

The amount of coal sold at this port is as follows:

	Tons.
Pocahontas and Toms Creek (sold by Messrs. W. E. Meyer & Co. from June 1, 1898, to June 1, 1899)	1,000
New River coal (sold by Messrs. Darrell & James from June 1, 1898, to June 1, 1899)	3,725
Total	4,725

	Tons.
Pocahontas and Toms Creek coal (sold by Messrs. W. E. Meyer & Co. from June 1, 1899 to March 30, 1900)	1,847
New River coal (sold by Messrs. Darrell and James from June 1, 1899, to March 30, 1900)	1,552
Total	3,399

EDWARD T. JENKINS,
Commercial Agent.

BERMUDA, *March 30, 1900.*

JAMAICA.

During the past twelve months, 5,200 tons of coal were imported by the fruit companies, all being of American origin, coming chiefly from Norfolk, Va. Bituminous is the only kind used. It seems that good results have been obtained, as I have heard no dissatisfaction expressed by the users. It is sold locally at $7.50 per ton.

There are no manufactories in my consular district; hence the demand is limited to the occasions on which vessels in the fruit trade take a supply for consumption on the homeward voyage. During the period under review, it is estimated that 4,500 tons have been used for this purpose.

No tariff restrictions exist relative to the importation of coal, this being one of the items on the free list.

NICHOLAS R. SNYDER,
Commercial Agent.

PORT ANTONIO, *April 6, 1900.*

DUTCH WEST INDIES.

Coal is used here to supply steamships, for dredging, for the electric light works, for the ice works (a new enterprise), and a little for blacksmithing. The Red "D" Line brings its own supply from New York, and so also does the Royal West India Mail Line. The English, French, German, and Italian lines touching here never take coal at this port, but bring their own to other points in the West Indies, where they recoal. The market for coal, therefore, aside from the small local use, is confined to vessels of war and an occasional Venezuelan steamer or yacht. The preference has been for Cardiff coal, and that was mainly used ten years ago. A gradual change has, however, been going on, the American product superseding the English. During the calendar year 1899, the amount imported was 3,828 tons, of which 699 tons came from Cardiff, 150 tons from Germany, and the balance from the United States. The coal that has come during the last year has been, I am sorry to say, of an inferior quality, owing probably to the scarcity, and has created no little dissatisfaction, from which it is not impossible that the trade may suffer in the coming year. United States coal, inferior quality, has cost about $6 per ton and retailed at from $8 to $10. Cardiff costs here about $7 and sells at from $10 to $12. Only one company is now handling coal; formerly there were three. Probably, the figures given for the last year do not vary much from the average.

The coal in demand by the war vessels, American and foreign, is Pocahontas. If arrangements could be made so that there would be always a plentiful supply of the best on this island, many more vessels would undoubtedly come here for coal and the trade be considerably extended.

The duty is only 3 per cent ad valorem.

ELIAS H. CHENEY, *Consul.*

CURAÇAO, *May 15, 1900.*

FRENCH WEST INDIES.

Both bituminous and anthracite coals are imported into Martinique from the United States, as well as from the United Kingdom, the latter, however, in small quantities for foundry purposes only.

The annexed statement will show the importation of bituminous coal into St. Pierre, to which should be added a minimun of 6,000 tons per month, or, say, 72,000 tons per annum, for the French Trans-Atlantic Company alone. All this is from the United States, and shows a marked increase. In former years, only two-thirds came from the United States and the rest from England, but the entire quantity now comes from our country.

The reasons for this increase in our trade may possibly be the following: English coal, the factory men think, burns the iron grates of the engines. The same fault is found by the company plying small steamers between this port and Port de France. The advance in price of the article, owing to the continual strikes in the United Kingdom, has also, I think, more than anything else, tended to divert the trade to the United States.

A. TESTART, *Vice-Consul.*

ST. PIERRE, *May 22, 1900.*

Importations of coals at St. Pierre, Martinique.

For last six months of 1898:	Tons.
From the United States	2,131
From the United Kingdom	1,613
From France	110
Total	3,854

	Tons.	Tons.
For the year 1899:		
From the United States		6,869
From France	1,671	
From France in briquettes	50	
		1,721
Total		8,590
For first three months in 1900:		
From the United States		3,952
From France		30
Total		3,982

SANTO DOMINGO (DOMINICAN REPUBLIC).

Very little coal is consumed in this consular district. One or two of the sugar estates, the electric-light plant of this city, the two war vessels belonging to the Government, and the Government machine shop are the only consumers worth mentioning in this district, except the Sanchez Railway Company, at Sanchez, which is an English corporation. I am informed that all the coal used by that road is brought from England. Other imports are from the United States.

Six hundred or 700 tons per annum are probably imported at this port for uses as above mentioned.

The duty is $2 per ton, with other small charges amounting in the aggregate to 59 cents. There are no coal mines in operation in this Republic, but it is said that there are coal deposits in the region near the Samana Bay.

C. L. MAXWELL, *Consul-General.*

SANTO DOMINGO, *April 24, 1900.*

PUERTO PLATA.

The only user of coal in this district is the Ferrocarril Central Dominicano, and since its management fell into American hands, some eight years ago, only American coal has been used.

Bituminous is the kind imported, and the quantity amounts to some 3,000 tons per annum. It is received from Philadelphia, and the company is well satisfied with the quality.

No coal mines exist in the district, nor are there any tariff or other restrictions on its importation.

THOS. SIMPSON, *Consul.*

PUERTO PLATA, *May 6, 1900.*

SOUTH AMERICA.

BRAZIL.

BAHIA.

In response to inquiries from large coal dealers in the States, I have several times reported to them on the coal trade in this district, and have tried to show that there was an excellent opening here if the proper effort were put forth. What was true in the past is even more true to-day, and I can not understand why some one of the inquirers has not already taken advantage of the excellent opportunity.

At present, the prices of coal fluctuate very much on account of the inability of local firms to buy in sufficient quantities at the mines, and on account of the great uncertainty as to delivery here because of the scarcity of ships in which to transport it. Ever since the strike at Cardiff—a little more than a year ago—prices have been gradually advancing, and the stock in hand has been reduced to a very great degree. In fact, one dealer has frequently had no coal whatever for delivery, while the stock of the other has often been below the 2,000 tons which they claim to maintain as a minimum. Since the Boer-English war began conditions have not improved, for though it is possible to buy more readily at the mines at the advanced price, there has been such a scarcity of vessels that freights have materially increased, making the true cost far in excess of the price at normal times.

The coal business here is practically in the hands of two firms—Wilson's Sons & Co., Limited, with head office at London and with coal depots at St. Vincent, Para, Pernambuco, Bahia, Rio, Santos, Montevideo, Buenos Ayres, and Rosario, and Edward Benn & Son, a local firm, which virtually represents Cory Brothers, of Cardiff. Both firms handle only English coal, chiefly of the type styled "Cardiff steam."

The particular brand handled by Wilson's is the Ocean Merthyr coal, while Benn supplies Cory's Merthyr, treble-screened coal.

For a while during the Cardiff strike, and at other times when the local dealers had put the prices up so that there was profit in coal, the firm of F. Stevenson & Co., which does a general commission business, sold several cargoes afloat, but it has made no effort to sell recently.

Besides the steam coal mentioned above, a small amount of New castle coal is also sold here for the use of the municipal gas works. Recently, first one and then the other of the firms has been supplying this coal under private arrangements, though prior to this sealed proposals were called for and the contract price was made public. At present, both firms have a cargo afloat for delivery.

There is an agreement between the two dealers as to the local selling price of coal. In accordance with this, coal was sold at 38s. ($9.25) general price and 37s. ($9) contract price in 1898, while in 1899 it had advanced to 40s. ($9.73) general price and 39s. ($9.49) contract price in the early part of the year and fluctuated up to the present prices, which are given at 49s. 6d. ($12.04) in bunkers for warships without contracts, and 2s. (49 cents) less for merchantmen, and 70 milreis ($11.90) on shore for general consumption and slightly lower for contract. The above are the prices quoted, though to my knowledge contracts are made much lower, and there are still in existence contracts for coal at 39s. ($9.49); it is true that some of them were made when coal was cheaper than it is now. The price asked, in fact, seems to be in accordance with the absolute need of the purchaser.

I was to-day informed by one of the dealers that the open price is likely to go even higher by the time of the receipt of the next cargo, on account of the increase in freight charges. At present, the cost price delivered in Bahia is said to be made up of the following items: Initial cost of coal at Cardiff, 22s. ($5.35); freight, 19s. ($4.62); insurance and charges, 1s. (24 cents); duties about 2$200, an equivalent to-day of 1s. 6d. (36 cents), or a total cost of 43s. 6d. ($10.58), to which is to be added 3 to 5 milreis (51 to 85 cents) for handling and lighterage here.

As stated above, the duties average about 2$200, the milreis to-day being worth on an average of 8½d. (17 cents). Coal is on the free list, but this amount is collected in custom-house fees, being a percentage of the tons imported and varying on account of the difference in calculating of the amount of coal landed, the coal being measured.

I can not find that during the past twenty years there has ever been any other coal here than English. I have tried to get the local firms interested in our coal of similar type to that imported, and have frequently put at their disposal a sample ton which was sent me, but I find that they are really powerless to act. The trouble is that these firms are managed from the London offices, and receive coal sent them by orders from there; they can not make contracts with men-of-war, the London offices themselves pooling these so as to maintain prices, nor can they even make contracts here without consulting the London head office, and consequently there is no hope of being able to do business with them from this end. There is also little chance in London, as one firm is a mine owner and the other has good connections, and as they are without competition here, they care nothing as to cost price for sales in Bahia.

The only way to get into the market would be to establish depots from Para to Buenos Ayres, and then our coal, with cheapness in its favor, could not help but find an opening. This is already the case at Rio and Buenos Ayres, where depots have been established, and the sales are rapidly increasing as the people become acquainted with its value, and the prejudice in favor of Cardiff coal is being overcome.

Coal arrives here in sailing vessels and in steamers. One firm imports exclusively in sailing vessels because of the lower freight and lack of facilities for handling large cargoes, such as steamers would bring; also because this firm sells many cargo lots to the various railroads, and it suits it better to have the small tonnage carried by sailing ships. Of course, it can never anticipate the arrival of its coal, and is frequently left without supplies or has two or three vessels arrive about the same time.

Sailing vessels discharge on an average 25 tons per day. Much more could be put out if the ships were given more lighters, but as most ships have from twenty to twenty-five lay days, there seems to be a disposition to utilize them as storehouses, in this way preventing the dumping of the coal into the deposit, lest they might need some afloat and be forced to reload the lighters, increasing the loss by breakage and otherwise. In other words, the amount of coal put out of a sailing vessel per day depends upon the wish of the consignee. As much as 100 tons per day have been put out from a ship with eight or ten men as crew, working from one hold with a hand wench.

The other firm depends almost entirely on steamers to bring its coal, as it is in a position to handle large cargoes with dispatch, and prefers to pay the slight advance of rates in order to anticipate its supply with certainty. Steamers usually discharge here at the rate of from 200 to 300 tons per day.

As there are no wharves here where vessels can go alongside and discharge, it is necessary for both Wilson and Benn to own their own lighters. These hold from 20 to 80 tons of coal. The first-named firm owns twenty, with a total capacity of about 900 tons, while the latter firm owns eighteen, with a capacity of 500 tons.

The firm of Wilson has a pier to which lighters are towed for discharge. Here the coal, by means of a large steam traveling crane, is hoisted in steel buckets and conveyed by small cars to one of the steel storage sheds of which five are connected with the depot. Each of these sheds has a capacity of about 2,000 tons, though of late the whole supply has been in the neighborhood of 2,000 tons, rather below than above that amount.

The firm of Benn has an old warehouse for a depot. Lighters with coal go as near as possible and discharge by means of baskets about the size of a large straw hat. Women are employed for this work. It is a tedious job, and wasteful on account of the coal falling overboard, to say nothing of the flying coal dust which enters every crevice of the ship and makes it most unbearably dirty.

It took in calm weather seventy-seven hours to put 702 tons of coal into the flagship *Chicago* and thirty-seven hours to put 243 tons into the U. S. S. *Montgomery*, or an average of less than 10 tons an hour. With such a rate, no merchant vessel can afford to lose the time to coal here, though I am credibly informed that many would if the coal were put in with more speed. Passenger steamers have taken on as much as 35 tons an hour, but those were made hurry jobs. Coal supplied to city consumers is conveyed from either depot in strong rope-bound bags, about ten making a ton.

The demand for coal here is confined to two elevators and two inclined planes which are constantly conveying passengers from the lower to the upper city; to the electric road power house; to the large cotton and other mills (about 20 in number); to the five railroads which draw their supply from here; to the lines of coasting steamers starting from this port and those engaged in conveying people and freight across the bay, and to the warships which enter the harbor. Of warships, there were 18 which took coal in 1899, and there have been 8 here so far this year, though few could get more than enough to take them to some other deposit. In one case, even though a material advance in the quoted price was offered for full bunkers, so that the ship might not be compelled to call at a port which would cause it to be quarantined later on, it was without avail.

The following table shows the imports of coal, and importers, from 1897 to 1899, inclusive:

Year.	Benn.	Wilson.	Stevenson.	Bahia and San Francisco R. R.	Miscellaneous.	Total.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1897	24,000	40,000	None.	3,000	9,000	96,000
1898	21,000	29,000	6,600	4,400	336	61,336
1899	11,000	20,000	1,500	3,200	5,538	41,238

The decrease in importation for the past few years is in part due to the substitution of wood for coal by several consumers, on account of the increased price of the latter; also to the fact that the great drought in that section of the country tributary to the railroads and the consequently greatly lessened crops has decreased the number of trains. The last boat from the States brought from the Estrado do Ferro San Francisco wood-burning grate bars, which are to supplant the coal-burning ones now in use. This road is the longest in this section and is owned by the Federal Government, but has been leased by Dr. Tieve e Argollo, who was educated in the States. On account of the high price of coal, he has decided to give wood a trial, and should his experiment succeed other roads will doubtless follow his example.

The Bahia and San Francisco Railroad, a short line of railroad owned and operated by Englishmen, is the only consumer that imports direct.

The ton mentioned above is the long ton of 2,240 pounds.

H. W. Furniss, *Consul.*

Bahia, *May 18, 1900.*

PERNAMBUCO.

All coal here has been imported from England up to this time. Last year, 66,123 tons were imported. Cardiff coal is mostly used, also some from Yorkshire for the gas company. The prices vary from 35s. to 50s. ($8.52 to $12.17) per ton. American Pocahontas coal is just beginning to be introduced, and is satisfactorily replacing Welsh coal, both as to quality and price. The duty on coal is 36 cents per ton. Harbor charges, including pilotage (which is compulsory), on vessels averaging 600 tons amount to about $150. Transportation from the United States is ample, both by steamers and sailing vessels.

EDWIN M. GUNSAULUS, *Consul.*

PERNAMBUCO, *May 5, 1900.*

UNITED STATES COAL FOR BRAZIL.

Minister Bryan writes from Petropolis, June 1, 1900, that in response to a note to the Brazilian foreign office, requesting information as to a contract for furnishing pit coal to the Central Railroad of Brazil, he has been informed that there is no doubt that United States coal will be used if it is of superior quality to coal already presented for trial. Copy of the last contract, with specifications, was sent by Mr. Bryan under date of June 12. It reads:

Contract entered into with The Brazilian Coal Company, Limited, for furnishiag 120,000 tons of pit coal during the year 1900.

On the 7th day of the month of December, 1899, there being present in the office of the director of the Central Railroad of Brazil the director of that road, Dr. Alfredo Eugenio de Almeida Maia, and Mr. John Phillips Johns, manager of the Brazilian Coal Company, known in this instrument as the contractor, the director declared that he would accept the proposition presented by said contractor in a public competition for furnishing 120,000 English tons, each of 1,015 kilograms, of Cardiff coal during the year 1900, subject to the following conditions:

1. The contractor binds himself to furnish coal of the first quality taken from the best mines of Cardiff, and that recently, from the mines of "Pentre and Gelli" with the name "Corys Merthir Large Steam Coal," or any other Cardiff coal mentioned in the list of the English Admiralty, which has been sifted three times, which does not produce more than 4 per cent of ashes, does not contain more than nine-tenths per cent of sulphur, and the calorific force of which is not less than 8,100 heat units per gram by Thompson's calorimeter, all of which will be verified by analyses and tests made by the administration of the road or by whomsoever it shall designate.

2. The coal which, when submitted to analysis and trial, does not show the qualities specified in the preceding clause, shall be rejected and immediately replaced by the contractor with other, so that the road shall not be left unprovided, in which case it shall supply itself from the open market, the difference in price in addition to the fine which he incurs being chargeable to the contractor.

3. The coal must be delivered in large pieces, not more than 5 per cent of them being permitted to have a volume of less than 30 cubic inches and not more than 7 per cent of refuse being admissible.

By refuse is understood the earthy part which passes through sieves with openings 1 centimeter square (?), inclined at an angle of 60° with the ground.

The test for this clause shall be made in any manner which the administration of the road thinks fit.

If the quantities of coal dust and refuse foun in each lot are greater than those stipulated, all the coal shall be screened at the expense of the contractor until the number of pieces less than 30 cubic inches in size and the amount of refuse shall be in the established proportions.

4. The coal shall be delivered on the ground at the maritime station of Gamboa or in the cars of the road at the same station in quantities amounting to an average of 12 tons a month, the road not binding itself to furnish cars for more than 500 tons each day.

5. For each English ton of 1,015 kilograms delivered according to the conditions of clause 4 the road shall pay 29 shillings 6 pence, the custom-house duties not being included in this price. Cargoes shipped and consigned to the road on its requisition shall be cleared (?) by employees of the said road.

6. In case the workmen in the mines served by the port of Cardiff stop work, the contractor shall always be obliged to furnish coal from some other place at the contract price, provided that the quality be the best of those which are employed on English roads.

7. The payments shall be made on the monthly installments at the federal treasury in bills of exchange for ninety days sight on London on the evening of the day preceding that on which the order for payment was given.

8. The furnishing must commence during the first fortnight of the month of March, 1900, and be finished in December of the same year.

9. The director of the road shall have the right to increase or diminish the monthly supply up to 20 per cent, provided that he shall have given sixty days' previous notice to the contractor.

10. The contractor, in order to guarantee the execution of the present contract, deposits in the treasury of the road, at the time of signing, the sum of 40 contos of reis, or its equivalent in gold, for the payment of fines to which he may be liable, and he must make good the original amount every time anything is taken from it for this purpose. This deposit may be replaced at any time by Government securities duly guaranteed; the guarantee in money shall not bear interest.

11. In case of a failure to carry out any of the clauses of stipulations, the director of the road shall have the right to fine the contractor from 2 to 20 contos of reis, according to the gravity of such failure.

12. A lapse in the supply for more than one month and the attempt to substitute an article of inferior quality shall give the director of the road the right to rescind the contract, with the forfeiture to the road of the guarantee spoken of in clause 10.

13. The contractor is expressly forbidden to transfer this contract under penalty of its being annulled with forfeiture of the guaranty spoken of in clause 10.

14. From the acts of the director of the Central Railroad of Brazil appeal is to be made only to the ministry of industry and public works.

And since they have thus agreed, this document has been drawn up, which, with their witnesses, they now sign.

Office of the director of the Central Railroad of Brazil, December 6, 1899.

ALFREDO EUGENIO DE ALMEIDA MAIA.

By power of attorney from the Brazilian Coal Company, Limited.

J. P. JOHNS, *First Clerk.*

As witnesses:

MESSIA DE SENO CAVALCANTE.
W. R. BARDLEI.

The payment of the pro rata tax on the above contract shall be made according to the partial payments for supplies, in conformity with articles a No. 15 and 17 No. 8 of the regulations for taxes which accompanied the decree No. 2573 of August 3, 1897.

Era ut supra.

The Secretary, M. FERNADES FIGUEIRA.

A true copy. Secretario,

M. F. FIGUEIRA.

Attest:
THOMAS SILVA, *Fourth Clerk.*

CHILE.

VALPARAISO.

The demand for imported coal in this consular district is large and growing. The total annual consumption at Valparaiso alone is from 250,000 to 300,000 tons. In other portions of this consular district as far north as but not including Antofagasta, the annual consumption is at least 100,000 tons, more than half of which is imported.

The demand for foreign is limited to what is known as steam coal, the Philadelphia, Pocahontas, and Cumberland coals being favorite brands. One cargo of Philadelphia coal brought by the British ship *Cromartyshire* in March, 1899, was used at this port and favorably reported upon, the "Compañia Nacional de Remolcadores" (National Steam Tug Company) having purchased 1,200 tons out of a caago of 2,500 tons. About 12,000 tons of Elk Garden coal, shipped at Baltimore, is in process of delivery at this port, by W. R. Grace & Co., for the Chilean Railways. It is reported as selling at $17.60 Chilean currency ($6.42 U. S. gold) per ton.

Prices fluctuate, ranging from 24s. to 31s. ($5.83-$7.53) per ton for steam coal, according to demand and port of delivery. At the present date, the price for first-class steam coal is 31s. 6d. ($7.65) per ton.

The largest portion of imported coal has heretofore been brought from Australia and from England. The principal local collieries of Chile are at Lota, Coronel, and Penco, and the character of the coal there produced is satisfactory for the uses to which it is put. The output of the three local collieries is about 20,000 tons per month, which finds sale along this west coast and supplies the steamer lines to the north, the gas companies and, largely, the railway lines. Chilean coal is not exported, except along the west coast as far north as Callao. The supply of native coal at the points above named is large and as yet apparently inexhaustible, but requires excessive labor to mine. Chilean coal is sold in this market at about 16s. ($3.88) per ton.

There are no duties charged in Chile upon imported coal. Since the war in the Transvaal, the amount of coal imported from Australia has materially decreased, and United States steam coal has largely taken its place, satisfactorily supplying the place of the coals from Australia and from England, formerly used; in fact, American steam coals are constantly growing in popularity on this west coast, and are esteemed superior to the best English.

The means of transportation from United States points to these west-coast ports is principally by steamer, coal being now rarely transported by sailing vessels.

JOHN F. CAPLES, *Consul.*

VALPARAISO, *May 23, 1900.*

ANTOFAGASTA.

A small cargo of Pocahontas coal was landed here in 1898, and parts of cargoes in 1899 and also in the current year; likewise coke and some anthracite, but a regular trade can hardly be said to exist, the above being merely occasional orders.

There is no prejudice against United States coal, but the price of British and Australian thus far suits the market better. British and Continental ships land coals from the United Kingdom and Australia at very low rates, often charging only 10s. ($2.43) per ton for this coast, and find their profit in the return cargoes of nitrate of soda. The consumption of nitrate of soda in the United States is limited to refined nitrate to be used in the arts and manufactures; our farmers and planters do not yet understand its value in agriculture. There are no workable coal fields in Chile north of Concepcion. South of this province there are several yielding very fair coal, and in 1897 some 40,000 tons were landed in this consular district from the Coronel and Lota mines.

The small lots of American anthracite imported in late years were mostly for foundries, for steam and other purposes.

In 1899, about 200,000 tons of British and Australian coal were imported into this district and sold at an average price of 27s. ($6.56) per ton.

In September of last year, Messrs. M. Guggenheims Sons took possession of a large smelter near this port, and the home house at New York has sent out coke and some coal for its use. Perhaps coal exporters might find it to their advantage to see this firm, and also Messrs. W. R. Grace & Co. and Beeche & Co., of New York, who have houses in the principal ports of this coast, and could advise them as to trade prospects.

C. C. GREENE, *Consul.*

ANTOFAGASTA, *May 12, 1900.*

COLOMBIA.

BARRANQUILLA.

Little coal of any character is used in this section of Colombia.

On the river steamers, 42 of which ply on the Magdalena River and its tributaries, and for most steam purposes, wood is used as fuel.

While there are in this coast region some deposits of coal, which is claimed to be of a good quality, no mines have as yet been developed.

The only coal imported is brought here by the Barranquilla Railway and Pier Company, Limited, an English corporation which operates a line of railroad between Puerto Colombia (Savanilla) and Barranquilla, a distance of about 17½ miles. The company uses coal for its locomotives, but in its repair shops wood is used. I understand that by the terms of its concession the company is required to furnish the Colombian Government at cost such coal as the Government may require for use on its vessels, 2 of which use coal.

At present, the company imports all of its coal from England, most of it in the form of "Star patent fuel," which is a bituminous coal dust pressed in blocks of 7 kilos (15.4 pounds) or 11 kilos (24.2 pounds) weight. About 500 tons of such coal are used per annum.

The last importation of this coal cost, June 1, 1899, 13s. 6d. ($3.28) per ton of 2,240 pounds, f.o.b. at Cardiff.

The freight on such coal in sailing vessels, which bring between 400 and 500 tons, is from 14 to 15s. ($3.41 to $3.65) per ton. Insurance costs from 2½ to 3 per cent.

The railway company also uses a small amount of Welsh lump coal. Such coal cost in March, 1898, 11s. 6d. ($2.80) per ton, f.o.b. at Cardiff.

I am informed that for use in its locomotives, the Barranquilla Railway Company prefers pressed fuel to mine coal, for the reason that it is handled more easily and with less loss in dust, and does not deteriorate from exposure to weather.

The patent fuel above referred to has been found to be unsuitable for use on ocean vessels, as the great amount of gas generated injures the eyes of the stokers and engineers.

This block fuel has also been used on some of the river steamers which are employed in the Government service, but in several instances, through the ignorance of firemen, boilers and grate bars have been damaged, and its use has been discontinued.

Some Lancashire steam coal was imported by the railroad company for the Government, February 25, 1898, at 9s. ($2.19) per ton. This coal seems to give satisfaction.

I am told by an official of the railway company that the only sample of pressed fuel from the United States which he has seen was a small piece of anthracite, and that the information accompanying it was to the effect that it had not as yet been manufactured in any quantity, and that prices could not be quoted.

Imported mineral coal pays a duty of one-half of 1 centavo,[1] plus 20 plus 25 per cent, or three-fourths of 1 centavo; equal to $0.046 United States gold per kilo of 2.2046 pounds.

As appears from the records of the Barranquilla custom-house, during the year ended June 30, 1899, coal was imported as follows: From England, 150 packages, weighing 468,996 kilos (1,033,949 pounds); Germany, 20 packages, weighing 937 kilos (2,066 pounds); United States, 1,212 packages, weighing 57,165 kilos (126,026 pounds); total, 1,382 packages, weighing 526,098 kilos (1,183,041 pounds).

W. IRVIN SHAW, *Consul.*

BARRANQUILLA, *May 11, 1900.*

CARTAGENA.

The importation of coal at this port is exclusively in the hands of the Cartagena Terminal and Improvement Company, which imports for its own consumption as well as for sale to war vessels, merchant vessels, private individuals for forges, etc., and the electric-light plant of this city. The prices of coal, as well as freight rates thereon, have been increasing steadily during the past year, from $4 (gold) in January, 1899, to $6.50 (gold) at present time, laid down at Cartagena, and the prices for sales have varied accordingly. At present, the Cartagena Terminal and Improvement Company furnishes United States war vessels with coal at $7.25, Colombian vessels at $8, and all other purchasers at $8.50; prices in United States gold.

The imports of coal, all from the United States, from January 1, 1899, to March 31, 1900, have been, viz:

	Tons.
Reynoldsville coal	5,968
Pocahontas coal	1,514
Total	7,482

The issues were:

	Tons.
United States war vessels	1,401
Colombian war vessels	759
Merchant vessels	404
Electric-light plant and others	451
Consumed by railway	3,442
Total	6,457

No duty is paid on coal imported by the Cartagena Terminal and Improvement Company, and this concession may be extended, by permission, to foreign war vessels; but coal imported by private individuals has to pay duty, according to the tariff, of 1¼ cents, Colombian currency ($0.046 gold), per kilo (2.2046 pounds).

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[1] Colombian paper currency.

The Pocahontas coal that is imported here deteriorates more rapidly in this climate than Reynoldsville coal, which, I am informed, gives very good results.

All the coal imported by the Cartagena Terminal and Improvement Company is from the United States. In regard to price, I am informed that it can be laid down at the wharf of this port cheaper from the United States than from elsewhere. If more attention were paid to screening, the results, I am told, would be more satisfactory.

Reynoldsville coal is shipped from Philadelphia, and Pocahontas from Norfolk, and all comes in chartered American sailing vessels.

AUG. T. HANABERGH, *Vice-Consul.*

CARTAGENA, *April 11, 1900.*

COLON.

The Panama Railroad Company and the Panama Canal Company are the only consumers of coal on the Isthmus of Panama, and therefore are the only importers of such fuel. The Panama Railroad Company uses almost exclusively Pocahontas coal, from the United States. Of this product, the above company consumed at this place 11,394 tons during 1899.

While the canal company does not adhere so closely to the use of United States coal, I have heard high appreciation of our steam coal expressed by French engineers of the company. Seemingly, this company places orders where most convenient and where the most liberal terms are offered. The canal company's importations of coal at this port for the year ended December 31, 1899, were: English coal (from Cardiff), 5,583 tons; patent fuel, or compressed coal, from France, 2,450 tons. The last is highly appreciated here on account of the great difference in waste compared with ordinary pit coal. Coal laid down at this port costs from $3 to $3.50 United States gold. The total consumption of coal at this place during last year was 19,427 tons.

T. S. FLOURNOY COBBS,
Vice and Deputy Consul.

COLON, *May 5, 1900.*

PANAMA.

All of the coal that is used here is consumed by the three steamship lines having Panama as terminal and coaling station. These companies also do their own importing, and by this means the entry of their coal is rendered free of tariff dues.

During the year 1899 there were brought to Panama in sailing vessels 42,006 tons of bituminous coal, and of this amount 35,400 tons were consumed. No anthracite coal is used, nor is United States coal imported. The bulk of the coal comes from New South Wales, Australia, while there is a small amount brought from Chile and Wales. All coals are shipped here in sailing vessels, and the average cost of transportation from the larger source is from 20s. to 23s. ($4.86–$5.58) per ton, delivered in Panama Bay. Australian coal can be had for an average of 30s. ($7.29). This includes cost of transportation, price of coal at source, and handling of same until delivered at this place. This same coal when sold here brings from 70s. to 80s. ($17–$19.44), and this price is frequently paid by foreign war vessels.

There are no coal mines in the vicinity of Panama and none of any extent nearer than Chile. The coal supply during 1899 was rather larger than the demand, but it bids fair to be much less during the coming year, on account of the difficulty of getting sailing vessels to bring it here, the crews being afraid of the yellow fever that played such havoc among the men of the coalers at this place last year.

In my judgment, the only drawback to United States coal is the difficulty of transportation to this point.

H. A. GUDGER, *Consul-General.*

PANAMA, *April, 1900.*

ECUADOR.

The coal trade here amounts virtually to nothing. The importations in 1897 were valued at about $7,000 United States currency and in 1898 at about $20,000, principally from England. Statistics for 1899 were destroyed by fire in November last.

About the only consumers of coal are the gas company, the Government, and the railroad. I see little probability of an increase or of an opportunity to sell American coal on this coast until an isthmian canal is built, and even then I think Peru will supply this coast when a railroad is built to the rich but at present inaccessible deposits within her borders. Coal is also said to exist in Ecuador, but whether in paying quantity and quality is yet to be determined.

PERRY M. DE LEON,
Consul-General.

GUAYAQUIL, *May 2, 1900.*

THE GUIANAS.

Coal is required for steaming purposes on the sugar estates, steam vessels, railways, and by the Demerara Electric Company.

About 40,000 tons are consumed here annually. Last year, 38,669 tons were imported from Great Britain and 4,722 tons from the United States.

Glasgow splints and Cardiff and American double screened are mostly used. The estates generally consume the former and steamers and railways the latter.

Pocahontas and Reynoldsville coals are the American brands which are imported.

Our coal has not proved entirely satisfactory, as it has been too fine and dusty, which causes it to sift through the grating bars of the furnace. This undesirable feature has prevented its ready sale. Its character is otherwise considered good.

No difficulty has yet been experienced in obtaining coal from the customary sources of supply.

Prices are from $5.50 to $8 per ton, according to the supply and demand in the colony.

The duty is 50 cents per ton. The freight from Glasgow is $4.25 to $4.80 per ton; from the United States, $3.25. It is shipped here in both sailing vessels and steamers, and though freights are considered high, importers do not complain of any scarcity of tonnage.

Three lines of steamers ply regularly between New York and this port, and sailing vessels from American ports average about one per month.

Dutch and French Guiana have no railways or other transportation lines. About 5,000 tons of coal per annum are used in the former colony. It is Cardiff coal and double screened.

GEO. H. MOULTON, *Consul.*

DEMERARA, *April 10, 1900.*

PARAGUAY.

There is no market for American coal in Paraguay. The country is exceedingly full of woods of all classes. The people use charcoal, even for cooking purposes. There is really no coal imported here, or such an insignificant quantity that no note of it is taken.

Of late there has been a supposed discovery of coal, but as yet it has not been verified. A gentleman who has been prospecting was in the consulate recently, and brought a few samples which he claimed to have found.

I do not think there is any prospect for coal of any kind for the Paraguayan market.

JOHN N. RUFFIN, *Consul.*

ASUNCION, *June 7, 1900.*

URUGUAY.

I would call attention to reports[1] already made from this office on coal, and say that nothing new can be added thereto. It should be noted, however, that the trials of American coal in this market have given very general satisfaction to the users, but the objection has been that the coal comes too small, this market having used the Welsh lump for many years. Last year, the Navy Department made a general contract for its coal in the River Plate ports, and designated "Welsh" coal, which of course had a detrimental effect on the reputation of American coal. The same firm that was instrumental in bringing American coal into the River Plate was also the party contracting with the Navy Department. At one time, the outlook for an enlarged trade for American coal was very promising, but only one firm had made an effort to establish a market, and with its withdrawal the demand ceased.

There is no increase in the consumption of coal locally. The returns for the years named show, in long tons, the importations to have been as follows:

1896	393,444
1897 (revolution)	257,909
1898	413,797
1899	386,410

All but a very small amount was received from English sources, and includes that used for railway purposes. All fuel for steam has to be imported. On contracts for considerable amounts, Welsh coal is furnished at from $8.50 to $9.50 per ton, delivered, while the domestic consumer pays an average price of $11 to $12 per ton. The duty and such taxes now amount to 50 cents per ton.

ALBERT W. SWALM, *Consul.*

MONTEVIDEO, *April 21, 1900.*

VENEZUELA.

The consumption of coal in this consular district is not large. During the year ended December 31, 1899, there was imported from—

	Pounds.
United States of America	1,200,000
England	6,000,000
Total	7,200,000

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[1] See Consular Reports Nos. 209 (February, 1898) and 222 (March, 1899); Advance Sheets Nos. 12 and 303. In the first report, the consul gave statistics of the coal trade in Montevideo, which are superceded by the figures quoted in this report. In the second, he noted the establishment of yards at that port by the Pocahontas Coal Company.

This was consumed by the Puerto Cabello and Valencia Railway Company, the Bolivar Railway Company, the Southwestern Railway Company, the Electric Light Company of Puerto Cabello, and the Electric Light Company of Valencia.

The coal from England is slack, pressed into squares after being mixed with a preparation that causes it to hold together. That from the United States of America is known as "run of mine" soft coal.

As there is no coal for sale here, its value can only be ascertained through its "present cost" landed, which is $8, United States currency, per ton of 2,000 pounds.

LUTHER T. ELLSWORTH, *Consul.*

PUERTO CABELLO, *May 9, 1900.*

AFRICA.

ALGERIA.

The quantity of coal imported annually is about 400,000 tons, which is at the same time the total consumption, as there are no coal mines working in Algeria. The principal kind of coal imported into Algiers is the Welsh steam coal, which is chiefly used by the steamships and also by the factories and the railways. The quantity of this kind imported yearly is at least 320,000 tons, and actual prices range from $3.50 to $4 per ton f. o. b. at Cardiff or Newport, or from $6.50 to $7.25 c. i. f. here.

Then come the Swansea, Newport, and Cardiff patent-fuel brands, "Merthyr," "V & S," "Arrow," and "Anchor," which are imported to the extent of about 50,000 tons annually. The actual price is from $4.50 to $5 f. o. b., or $7 to $7.50 c. i. f., Algiers.

As regards gas coal, this comes from Newcastle on Tyne, and the qualities chiefly imported are the "New Pelton," the "Pelaw Main," "Lambton," and the "Holmside." The quantity reaches 25,000 tons yearly. This quality is also used here for smithy purposes. The price is $4.25 f. o. b. Newcastle, or $6.75 c. i. f. here.

Some other kinds of coal are also imported from Glasgow and Newcastle on Tyne (steam and household coal), but the normal quantity does not exceed 15,000 tons a year. At present, prices are about $4 f. o. b., or $6.50 c. i. f.

As regards anthracite coal, this comes from Swansea, but the quantity imported yearly is below 200 tons.

A local firm tried lately to import a cargo of "Georges Creek" coal from Baltimore, but the American firm stipulated that it could not load any steamer except in turn, and it was impossible to find any shipowner willing to accept such a clause, and the business fell through, so that American coal has never been imported here.

An objection that is made to American steam coal here is that it is not lumpy enough, and that it is not screened at colliery or before shipment, as is generally the case with coal from Great Britain.

Foreign coals used inland are subject here to a duty of 24 cents, plus 2 cents for statistics; say in all, 26 cents.

Coal for the use of steamships only pays the 2 cents duty for statistics.

The rate of freight for coal from Great Britain fluctuates from $2.25 to $2.50. It would be $4 to $4.50 from the United States.

The discharging of the cargo is done by the receivers, at the rate of 600 to 700 tons daily, ship paying 25 cents per ton.

It would be good policy on the part of American exporters to make a sacrifice in price in order to have their qualities tried and known.

I have to acknowledge my indebtedness to Mr. L. L. Legembre, the able vice-consul at this place, for the facts contained in the foregoing report.

DANIEL S. KIDDER, *Consul.*

ALGIERS, *April 6, 1900.*

AZORES.

I have to acknowledge receipt of circular dated March 10, 1900, entitled Foreign Markets for American Coal.

In this connection it may be pertinent to remark that almost simultaneously there arrived here from Newport News the British steamship King Edgar, laden with 3,600 tons of New River coal consigned to Messrs. Bensande & Co., of this port. The manager of this enterprising firm assures me that as soon as this steamer is discharged, she will return to Newport News for another cargo. Heretofore, all the coal used (with the exception of two small cargoes) has been bought in England and is of the kind or quality known as "steam coal," the present brand being known as "Ferndale."

The quantity consumed during the year ended December 31, 1899, amounted to 75,000 tons and it is confidently expected that the coming year's requirements will be even more than this.

Supplementing this departure in the coal line, the same firm has just completed the installation of a new discharging and loading apparatus, and yesterday I was an invited witness to the operations of this new Temperly transporter, by the aid of which the managers hope to be able to give steamers quicker dispatch, and it is expected that this new improvement will attract additional tonnage, as St. Michaels possesses great natural advantages and many desirable features for vessels engaged in the Atlantic freight trade.

Present price to steamers range from 22s. 6d. to 37s. ($5.47 to $9.00), but in more normal times the price is 20s. to 24s. ($4.87 to $5.84); this difference being accounted for by the fact that early in the season, when prices were low, a large number of vessel owners made contracts for their year's supply, while others were caught napping and are now being made to pay the full price.

There are no coal mines on any of the Azorean Islands, and what American coal has been used here has given the best of satisfaction. In respect of quality, American coal has nothing to fear. I have interviewed captains and engineers of ships of all nationalities, and almost without exception they have declared that American coal was the equal of the best Welsh coal mined. One captain assured me that after a careful and exhaustive test of Pocahontas coal purchased in Bermuda, he found it equally as good as Welsh coal, and in future would give it an equal chance when making his purchases. While prices f. o. b. seaboard in both countries for coals of same quality have been in favor of the American as against the English or Welsh product, several reasons have operated in the past to keep local dealers from purchasing, viz:

First. The absence of American tonnage, either steam or sail.

Second. Vessels plying between England and America can not always secure cargoes outward to America. These vessels will accept low freights from Cardiff and other coal ports to St. Michaels, and in the past have been satisfied to make expenses of the outward trip. Where vessels load coal in America for St. Michaels, they either must return light or go on to some Mediterranean port, as no cargoes are to be secured here. Freights from Cardiff have ruled as low as 5s. 6d. ($1.34), although the usual price is 7s. to 8s. ($1.70 to $1.95).

Third. There is a natural fear brought about by the publicity given to the new departures in the coal trade, that English ship and mine owners, who are more than intimately connected, will instruct their captains to arrange their stops at places where such competition is not to be found. Fair Play, a paper published in London in the interest of British shipping, is constantly calling attention to these new invasions, and a perusal of some of its older issues will show that they even suggest the remedy. With these exceptions, there are no restrictions to the importation of American coal, as the tariff and municipal tax are taken care of by the buyer. The present price for steam coal in Cardiff is 22s. to 23s. ($5.35 to $5.95); freight, 8s. 6d. to 9s. ($2.07 to $2.19), making gross total cost per ton 31s. to 32s. ($7.54 to $7.79). I am unable to quote freight from American ports, but suppose it is about 14s. ($3.41), coal costing 10s. ($2.43), making price here 24s. ($5.84). In addition to that used by this island, there is also a large quantity consumed in the islands of Terceira and Fayal, which amounts to about 25,000 tons, making a grand total of 100,000 tons, an amount I believe sufficiently large to justify a more earnest attempt to gain at least part of the trade, than has been made in the past.

The records in this office will show that I early recognized the possibilities of this business, and did not hesitate to call the attention of leading firms to the opportunities of the place, but I am sorry to say that until lately my efforts seem to have been of no avail. I earnestly hope that this new beginning will not be allowed to die, and that the present cargoes are the forerunners of others which are to follow. For the convenience of firms desiring to address directly people interested in the coal business, I give the following names, and would add that all are responsible: Bensande & Co., Lisbon, Portugal; Clemante Jacintho da Costa, J. Mello Abren, Ponta Delgada, Island of St. Michaels; Silveria Edwards & Co., Horta, Island of Fayal; Henriques de Castro, Island Terceira ,Angra.

GEO. H. PICKERELL, *Consul.*

ST. MICHAELS, *April 10, 1900.*

CANARY ISLANDS.

The coal trade in Teneriffe is confined almost solely to the supply of passing steamers for bunkering purposes. There are no manufactories of any importance, and the shore trade is therefore insignificant, coal being required only for household purposes, and this in small quantities, as the majority of the inhabitants use charcoal for cooking. From 150 to 180 steamers call monthly, the majority in order to replenish their coal supply.

The total trade of the island amounts to an annual sale of from 300,000 to 350,000 tons. This is almost entirely what is known as best quality South Wales steam coal.

Occasionally, cargoes of Scotch or North of England coal are imported, but this is only when, from strikes or other special causes, South Wales is unable to keep up the supply. The coal is imported from Cardiff in steamers of about 2,500 to 5,000 tons, and freights vary from 6s. 6d. ($1.58) to 10s. ($2.43) per ton; at present, they are about 9s. 6d. ($2.19) per ton.

Present price of coal is from 25s. ($6.07) to 35s. ($8.50) per ton, free on board and trimmed into bunkers according to contract.

There are no coal mines in the Canary Islands. Port dues on imported coal amount to 3d. (6 cents) per ton.

Regarding American coal, it will be gathered from the foregoing that the only class that can compete is the very best quality steam coal. No American coal has been imported here except during the strikes in the Welsh mines some years ago, when local dealers had to import our coal or stop business altogether; but if prices are satisfactory, there would appear to be no reason why first-quality products should not meet with a market. I inclose reports of Consular Agent Peter Swanston, at Grand Canary, and Consular Agent Manuel Yanes at Las Palmas.

SOLOMON BERLINER, *Consul.*

TENERIFFE, *April 12, 1900.*

REPORT FROM GRAND CANARY.

As far as can be ascertained, about 800,000 tons of coal were sold to steamers calling at the port of Las Palmas in the year 1899. Two thousand two hundred and eighty-two steamers of all nationalities entered and cleared from this port last year. The coal is brought almost entirely from Cardiff; a small quantity of north country Newcastle coal has also been introduced.

The contract price delivered on board here is at present 25s. per ton ($6.07). There is a good opening for Pocahontas coal, best quality, if suitable freights could be arranged. The consumption of coal outside of that mentioned is very small.

REPORT FROM LAS PALMAS.

The coal sold on this island for shore consumption will not amount to over 200 tons per year. There will be a coaling station on the island in two years, when the breakwater is finished.

EGYPT.

The demand for coal in Egypt is chiefly for use in sugar and cotton factories, railways, mills, pumping stations in the interior, and also for steamship supplies at Alexandria and Port Said and on the Nile. The total consumption of coal last year (1899) was 825,000 tons. The kinds and qualities mostly needed, or especially in demand are Cardiff, Newcastle, Scotch, and Lancashire, of the best qualities. The current prices are $8.68, $8.08, $7.85, and $7.73, respectively; duty, 8 per cent ad valorem and all charges free into railway trucks on quay. The source of supply heretofore has been Great Britain. Three cargoes of American coal of about 9,000 tons have recently arrived at Alexandria for the Egyptian Railway administration; price, $7.85 free into trucks. This was all New River steam coal. Additional contracts have been entered into with Alexandria merchants to supply 70,000 tons more of American coal this year. The only complaint made against American coal is on account of the large quantity of dust it contains as compared with other coal; this objection, however, is not serious and will not deter buyers.

There are no coal mines in Egypt, and the new field for the American product is well worth cultivating. There are ample stocks at Alexandria and Port Said.

JOHN G. LONG,
Agent and Consul-General.

CAIRO, *May 3, 1900.*

FRENCH WEST AFRICA.

The coal furnished from Dakar last year amounted to about 55,000 tons, which will probably be exceeded this year by some 20,000 tons.

The coal has hitherto come from Cardiff and has been of the best grade used by steam vessels. The price at present, delivered at Dakar from Cardiff, is 35 francs ($6.75) per ton, and the holders are selling at 45 francs ($8.68) per ton.

Coal is said to exist in the southern part of this colony, but no serious attempts have been made to mine it, and it is not probable that anything will soon be done in this direction.

The Messageries Maritimes (steamship) Company has furnished the Government here for a long while and is, I believe, under contract to keep several thousand tons for the purpose constantly on hand. It disposes of about 15,000 tons annually. Passing steamers are supplied by the new "Compagnie Française des Charbonnages de Dakar" (capital, 500,000 francs, or $96,000; address, 30 rue des Bourdonnais, Paris).

The main drawback to American trade would be, I think, the question of freight.

PETER STRICKLAND, *Consul.*

GORÉE-DAKAR, *May 26, 1900.*

MADAGASCAR.

There is very little demand here as yet for coal of any description. Coal is imported from France, and consists of screenings and tar pressed into brick form (the product of a French patent). About 1,000 tons of this fuel are imported annually into Majunga and Tamatave.

There are occasional boats calling here; the mail and freight steamers generally take coal at Réunion or Mauritius.

For the small steam tugs and ice factories, native hard wood is used, which appears to answer all purposes.

Coal veins are known to exist in Madagascar, but they have not been developed.

There is no tariff or other restriction imposed upon coal. The sole importers are Messrs. Rébut & Saurrante, who sell patent fuel at from $12 to $18 per ton.

M. W. GIBBS, *Consul.*

TAMATAVE, *May 15, 1900.*

MADEIRA.

Madeira has no coal mines.

The requirements here are for bunkering steamers, the consumption on shore not being more than 3,000 or 4,000 tons per annum.

The quantity delivered to steamers is from 150,000 to 200,000 tons per annum. Welsh coal only is supplied.

The prices are arranged between the coal firms and steamship owners by contract at end of year. This year the contract price is 22s. ($5.34) put into bunkers of steamers.

No American coal has been imported here. It could not be profitably imported as, owing to the shorter distance from Cardiff, Welsh coal must have the preference. There are no restrictions on importation of coal imposed here. Landing expenses are very heavy, and the two coaling firms carry on their operations chiefly by means of hulks and lighters.

Coal is imported in steamers and sailing ships, the present rates of freight from Cardiff being from 10s. to 11s. ($2.43 to $2.65) per ton.

During the quarter ended March 31, 1900, I issued 43 bills and supplemental bills of health to ships going to America. Most of these ships brought coal to this port.

For the quarter ended March 31, 1899, I issued 22 bills and supplemental bills of health.

About a year ago, Cory Brothers & Co. established a coaling station here, and this has caused the increase in bills of health at this port.

Before this Blandy Brothers & Co. were the only coal dealers here. To-day, contract coal is cheaper here than at Cardiff, and the consequence is the bay is full of shipping.

T. C. JONES, *Consul.*

FUNCHAL, *April 17, 1900.*

MOROCCO.

The consumption of coal of any kind at Tangier is very small, the whole amount during the past year being only 5,000 tons.

All of this coal came from either Cardiff or Newcastle. The price per ton is now 38s. ($9.25), but before the Transvaal war it was only 26s. ($6.33).

The tariff paid at Tangier is $1 (Spanish) per ton. No American coal is used in Tangier. There is no objection to it, but it is absolutely unknown, there being no direct communication between Tangier and the United States.

I believe that if direct communication could be established, a considerable trade might be developed. A large quantity of American petroleum is consumed in Morocco, but is brought here either from Germany or Marseilles.

S. R. GUMMERÈ, *Consul-General.*

TANGIER, *April 14, 1900.*

ST. HELENA.

With the exception of about 500 tons of British "North country" coal entered yearly for use of the garrison in this island, the only import consists of South Wales steam coal, loaded at Cardiff.

About 2,000 tons of this coal are imported annually by the contractor for the British Admiralty and for supply of war ships of other nationalities and the general mercantile marine.

The importation in 1899 was 2,000 tons, and during the present year from January to April, 1,700 tons; the actual available stock to-day being 1,800 tons.

The demand for steam coal is by no means regular nor extensive; the sale in 1899 was 1,600 tons, price fluctuating between 50s. and 80s. ($12 and $19.46) per ton, regulated by cost in England, plus freight by sailer, 18s. to 26s. ($4.38 to $6.33) per ton, and subject to the ordinary trade conditions of supply and demand. The tariff upon coal is 3s. (78 cents) per ton.

The latest sale was made to a Netherlands cruiser early in present month—300 tons, at 80s. ($19.46).

As a rule but little American coal is used, though occasionally a few tons of surplus ships' stores are landed.

There are no coal mines in St. Helena, wood being mostly used. The only importation of American coal (anthracite) from the States, as far as I can trace, was in 1852, when about 300 tons were sent by the Navy Department on a sailing vessel from Philadelphia for use of the U. S. steam frigate *Powhattan*, bearing the flag of Commodore Perry, commanding the expedition en route to Japan.

ROB. P. POOLEY, *Consul.*

ST. HELENA, *April 26, 1900.*

SOUTH AFRICA.

The imports of coal into all of South Africa, except through ports of Portuguese territory on the east coast, in 1899 were—

	Tons.
United Kingdom	352,722
New South Wales	1,608
Victoria	50
Belgium	11
Norway	1,881
Canada	200
United States	11,502

The great bulk of coal, both for steam and domestic purposes, comes from Wales and Scotland. Natal has several coal mines, but the product is said to lack the steaming qualities possessed by Welsh coal. American coal can be substituted for Welsh as steam coal and for Scottish as domestic coal, but it is doubtful if domestic coal could be exported to Natal, as the mines of that colony can supply the home demand during times of peace. At the present time all the mines are not producing, having been in whole or in part destroyed by the Boers. In times of peace, Welsh coal is never less than $12 per ton, and I have seen it much higher during strikes at the Welsh mines. The duty on coal is 2s. (48 cents) per ton of 2,000 pounds in Cape Colony, and 3s. (72 cents) in Natal.

J. G. STOWE, *Consul-General.*

CAPE TOWN, *May 8, 1900.*

TUNIS.

Tunis, producing no coal or lignite, relies upon France or England for its supply. I have tried, myself, during my commercial career, to arrange for operations in this product, but the very heavy freights and the obligation of dealing in whole cargoes at a time, involving serious outlay and great loss of time, proved an obstacle. Nothing can be done, therefore, until regular lines of steamers are established between America and the Mediterranean, calling at fixed places, like Gibraltar, Algiers, Tunis, Malta, or Palermo, and carrying return shipments of olive oil, skins, hides, wool, etc.

The English coals are generally preferred by the consumers here. Their prices at the present moment are the following:

Description.	English value.		United States equivalent.
	s.	*d.*	
Cardiff steam coal, colliery screened:			
Best	22	0	$5.35
Second best	20	6	5.47
Cardiff small	14	3	3.47
Newport steam, colliery screened:			
Best	19	0	4.62
Second best	18	6	4.50
Newport small	14	0	3.41
Rehondda No. 3, colliery screened	22	0	5.35
Rehondda small	17	6	4.26
Foundry coke	34	0	8.28

All the above prices are f. o. b. plus 2d. (4 cents) per ton wharfage, subject to the fluctuation of the market. The present rate of freight for Tunis would be about 14½ francs ($2.80).

ALFRED CHAPELIÉ, *Vice-Consul.*

TUNIS, *April 26, 1900.*

ASIA.

ADEN.

Aden has been for many years an important coaling station, both for vessels of commerce and war, it being a convenient port of call on the highway of commerce between the east and west since the opening of the Suez Canal. With the exception of Perim Island, Aden is the only coaling station within this section. However, since the appearance of the plague, two months ago, a comparatively small number of vessels has called, even for coal, and while some weeks ago there seemed to be considerable difficulty in keeping coal on hand, at this time every yard is well filled. I was told by one company this week that instead of its usual demand of from 1,200 to 1,500 tons, there was at present a demand for only about 300 tons.

I see from the Aden trade report for the official year 1898–99 that there were imported here 154,587 tons, which seems to be a fair average for the past five years. Of course, the only demand is for the supply of passing steamers, as there is practically no other consumption.

The demand, naturally, is for a good steaming coal, and the best Welsh coal is the kind kept, except when it can not be obtained, when an inferior quality is substituted.

The price varies considerably, at present being 40s. ($9.72) f. o. b., while it has been 32s. ($7.77) within the past eighteen months. The increased demand for coal in Great Britain for manufacturing and emergency purposes, and the increased freight rate, have affected the price of coal here as elsewhere; but in ordinary times the price charged is considered very high.

No American coal has ever been sold here, the supply coming exclusively from the United Kingdom. I have had several inquiries from Americans as to the possibility of selling coal here, but the local companies do not seem to be willing to investigate our prices. When our dealers begin to come this way, I have no doubt they will get a good share of the trade. I should say on behalf of the local agents that the buying is done by the head office in London, there being several branches in the East.

There is also a coal company at Perim Island, 98 miles west of here, which does a good business, but I have not been able to get statistics. The same class of coal is sold there, and there is a temporary scarcity, due to the increased demand by vessels formerly coaling at Aden, which will continue until Aden is free of the plague.

The tolls charged here are 2 annas (4 cents) per ton on landing when imported for use of importers, and 4 annas (8 cents) when imported for sale.

E. S. CUNNINGHAM, *Consul.*

ADEN, *May 19, 1900.*

BRITISH INDIA.

The vast shipping at this port, the extensive railroad systems, the great mill industries—embracing, perhaps, 75 per cent of the manufactories of the Indian Empire—its teeming population, not only make Bombay the "Gateway of India," but also an enormous consumer of fuel. Eighty per cent of all the coal imported from foreign countries is entered and consumed at Bombay. It is estimated that about 4 lakhs (400,000 tons) of coal are consumed annually at this port and city. There is no coal mined in the immediate vicinity, and the entire consumption is imported from foreign countries or shipped and freighted from the coal-producing centers of India. There is no tariff on coal, it being duty free throughout India. England, Japan, and Australia are the main sources of foreign supply, and the mines in the Bengal Presidency are the principal origin of native supply. At present, there is no English or Welsh coal in the local market, and Japanese coal is not in favor on account of its inferior quality.

The following table shows the principal countries from which foreign coal was imported into all British India and the amount and value during the year ended March 31, 1899.

Countries.	Tons.	Value.
United Kingdom	295,107	$1,860,233
Japan	32,231	161,497
Australia	18,777	119,291
Other countries	873	5,785
Total	346,988	2,146,806

Of the above total amount, there were entered at Bombay and Sind 301,492 tons, of the value of $1,831,172.

During the period of eleven months ended January 28, 1900, coal was imported into all British India as follows:

Countries.	Tons.	Value.
United Kingdom	284,736	$1,806,656
Other countries	102,206	511,380
Total	386,942	2,318,036

During the eleven months from March 31, 1899, to the end of February, 1900, there were exported from India 271,666 tons of native coal, of the value of $543,178, 156,616 tons of this amount being shipped to Ceylon. A small portion, perhaps less than 500 tons of the above total, was coke. The exports of Indian coal during this period have been slightly less than during the same eleven months in 1898–99, but considerably more than during the similar period in 1897–98.

The next table gives the quantity and value of native coal exported from all British India, and from what provinces, during the year 1898–99:

Provinces.	Tons.	Value.
Bengal	325,969	$1,083,558
Bombay	806	4,040
Sind	1	7
Burmah	2	11
Total	326,778	1,087,616

The following table shows the quantities and destinations of the above exportations:

	Tons.		Tons.
United Kingdom	109	Mauritius	2,708
Germany	2	Zanzibar	150
Natal	287	Arabia	465
Aden	14,416	Straits Settlements	93,462
Ceylon	214,986		
France	3	Total	326,778

In reducing the value of the rupee, in which local values are given, I have calculated 15 rupees to the pound sterling, making the rupee about 32½ cents in United States money.

The following will give the present average price per ton of the principal kinds of coal in this market:

Japan	$3.58
Davison's West Hartley	5.85
Desharghur (Bengal)	5.10
Jardine's Navigation (Bengal)	4.60
Giridhi	5.15
Cardiff	6.50
Singarini (Hyderabad)	4.50
Muir's Navigation (Bengal)	4.55
Bird's Navigation (Bengal)	4.55

The Indian coal is bituminous, and of various kinds and grades. The better qualities are quite fair for steam navigation and factory purposes. Its average rank, in comparison with Cardiff coal, is about 30 per cent inferior. Being a cheaper coal than the Welsh, it is taking possession of the local markets and finding its way into ports of the Indian Sea.

India possesses inexhaustible supplies of coal. The mines at present worked do little more than tap the sources easy of access from existing railways, and hence every new railway may be regarded as calculated to increase the production of coal. In 1895, there were in all India some 90 coal fields more or less worked, and about half that number were being prospected. They are situated principally in the presidency of Bengal, though they extend into the presidency of

Madras, central India, the Punjab, and other localities. During 1893, the total output of all India amounted to 2,529,855 tons. About 1,000,000 tons of this were used by the railways of India and the balance by shipping, Indian factories and industries, and the export trade. Coal is practically not in demand in India for domestic consumption. Coke and charcoal are largely used in the cities, wood, however, being the principal fuel for domestic purposes. "Uplie" (prepared cow dung) is mainly employed by the natives for domestic purposes. Wood is expensive and is always sold by weight. In the Bombay market, babul (acacia), a hard and heavy wood, is mostly used for fuel purposes and retails at 4 annas for a maund, or 8 cents for 28 pounds; 6s. per khandi, or about $1.95 for 569 pounds, an ox-cart load.

I am informed by Messrs. Brooks & Co., coal brokers of this city, that less than a year since, a shipment of 2,000 tons of American coal, called "Powelton," was imported from New York on the steamship *Inchmonia* by Messrs. Graham & Co., merchants of Bombay, and divided among three local coal firms. It was mixed with Welsh coal and sold as Cardiff at $5.45 per ton. In reply to my inquiry of a coal firm as to the favor it received, they said, "We would like some more of it." American anthracite coal is not known in this market, and American bituminous only in a very limited way.

Costs of transportation, including freight and Suez Canal tolls, may so enhance the cost of American coal as to practically prohibit it in this market. However, this question may be successfully met by shipping in sailing vessels around the Cape of Good Hope, as the Standard Oil people do their product.

WILLIAM T. FEE, *Consul.*

BOMBAY, *May 3, 1900.*

INDIA'S COAL FIELDS.

Consul Halstead sends from Birmingham, June 21, 1900, a clipping from the London Daily Mail, as follows:

> According to a speech made by the manager to the shareholders of the Nerbudda Coal and Iron Company, Limited, in London yesterday, India is capable of supplying great quantities of coal.
>
> During the last five years, he said, he had discovered a new coal field capable of yielding over 12,000,000 tons of coal in gross.
>
> Next year he expected an output of 60,000 tons, but the mine was capable of yielding 100,000 tons per annum of good marketable coal for the next forty-four years.
>
> The Indian railways had increased their orders for the present year, but the trade with the cotton mills and presses promised very badly so far, though it might be brisk toward the close of the year.

CEYLON.

The imports of coal and patent fuel into Ceylon for the year 1899 were 419,975 tons, valued, for statistical purposes, at $3,050,000. The countries of production were: United Kingdom, 246,697 tons; British India, 159,310 tons; Australia, 1,591 tons; Japan, 574 tons; United States, 2,802 tons. Nearly all the Welsh coal is sold to steam vessels and reshipped.

The local railways, gas company, and all mills use Indian coal, and this variety is also coming largely into use for steam vessels (on account of price probably), though its economic value is said to be 30 per cent below Welsh (Ferndale) coal, the present price of which, in the absence of a contract, is $11.40 per ton delivered into ships' bunkers. The price of Indian coal similarly delivered is $5.60 per ton.

The American coal, above mentioned, was said to be of the Pocahontas variety, which is considered by those familiar with it to be about equal to Ferndale coal, and probably 50,000 tons could be sold here annually. Mr. C. L. Morey, the vice and deputy consul, called the Pocahontas people's attention to this market for their coal in 1893, but they said there was no margin for profit at that period.

There are no local coal mines, but the imports are fully equal to the consumption; consequently there has never been any serious scarcity.

The freight on coal from Great Britain is usually about $3 per ton, but is enhanced now to $4 per ton, owing to the British-Transvaal war. The freight from India averages about $1.60 per ton. What the freight from America would be can be better ascertained on the spot by intending shippers. I fear, however, that it would be very high—probably $6 to $7 per ton.

There is no local duty on coal, but the Colombo Harbor dues are 8 cents per ton (United States money), payable by the ship, and the landing charges 30 cents, payable by the receiver, who also pays 40 cents per ton for shipping.

The following newspaper paragraph indicates that the local import of Japan coal is increasing.

JAPANESE COAL FOR COLOMBO.

The second cargo of Japanese coal for Colombo arrived yesterday by the steamship *Madeline*, the first one having arrived some weeks ago by the steamship *Radnershire*. The *Madeline* brought 4,000 tons, 2,000 tons being for Messrs. Aitken, Spence & Co., and the other for the Messageries Maritimes Cie. The Japanese coal, it may be stated, is very much cheaper than the Cardiff coal, but in quality it is far behind the latter.

W. MOREY, *Consul.*

COLOMBO, *April 19, 1900.*

CHINA.

CHEFOO.

The coal consumed in Chefoo is either Chinese, Japanese, or Welsh.

Kaiping (Chinese) coal is of various grades and comes from the mines north of Tientsin. Best quality sells at retail for $11.50 Mexican ($5.44 gold) per ton; second quality, $9.50 ($4.49) per ton. So far as I know, none of it is used for foreign steamers.

Japanese coal, best, sells for $10.50 Mexican ($4.97) per ton, and is used to a considerable extent by coasting steamers.

Cardiff or Welsh coal is imported for the foreign men-of-war, and prior to the occupation of Port Arthur by Russia, Weihaiwei by the British, and Kyaochau by the Germans the fleets of those nationalities coaled here, as also did our own prior to our occupation of Manila. Nevertheless large stocks are carried here, principally for the British fleet. The grades now here are either Ocean Merthyr, Ferndale, or Nixon, and are delivered on yearly contracts at about 65s. ($15.79) per ton. No American coal is imported, and in the absence of our fleet it is doubtful if a demand could be made for it.

There are no factories here to speak of. The native smithies use Japanese coal or charcoal.

Merchants here would import coal for our ships if inducement were offered; not otherwise.

Importation of coal for calendar years 1897 and 1899.

Kind.	1897.	1899.
	Tons.	*Tons.*
Foreign (Japanese and Welsh)	26,837	30,185
Native (Kaiping)	20,039	30,612
Total	46,876	60,797

Foreign coal pays 5 candareens (about 4 cents gold) per ton. On reshipment, no matter whether for export or consumption on board the vessel in question, a drawback (or exemption certificate if applied for) is granted.

Native—Hupeh, Anhui, Kwangsi, and Kaiping—pays 1 mace (say 8 cents gold) per ton. No drawback.

Other native coal pays 3 mace (24 cents gold) duty per ton.

If we could induce the foreign fleets at Port Arthur, Weihaiwei, and Kyaochau, as well as our own Government to make contracts for our coal, as Great Britain does for Welsh, a good market would be opened.

I see no reason why the Russians across the bay should not buy of us, and probably they would if the matter were brought to their attention, as they are storing large quantities of Japanese and Welsh coal and consume immense amounts in their various works.

The Germans are exploring Shantung for coal, and one German firm has commenced operations near Weihsien.

An account of the coal fields in the county of Taian, this province, will be found in my report in Advance Sheets No. 399, April 13, 1899.[1]

Some anthracite coal is imported into Shanghai.

Through the courtesy of Messrs. Cornabé, Eckford & Co., of this port, I am able to inclose herewith the latest Shanghai coal report.

JOHN FOWLER, *Consul.*

CHEFOO, *April 23, 1900.*

SHANGHAI, *April 19, 1900.*

The undernoted figures are for the well-known kinds, and do not represent the rates for small quantities nor for the common kinds:

Cardiff, ex godown, 20.50 taels ($14.70) per ton; limited demand.
American anthracite, ex godown; no stock.
Sydney Wollongong, cargo, ex godown, 13 taels ($9.32) per ton; quiet.
Otzuji, ex godown; Karatz, ex godown; Ohnoura, ex godown; Miyanoura coal; Komatzu, ex godown; Hokoku, ex godown; Ohnoura, 3 feet; Ohnoura, 5 feet—6.50 to 7 taels ($4.66 to $5.02) per ton.
Japan: Takasima lump, ex godown; Takasima small, ex godown; Namazuta lump, ex godown; Namazuta dust, ex godown; Miike lump, ex godown; Miike small, ex godown—all contracted for.
Kaiping coal (ex godown): Linsi lump, 7.50 taels ($5.38); Linsi mixed, 5.50 taels ($3.94); Tongshan No. 9 lump, 8.50 taels ($6.09); Tongshan No. 9 dust, 5 taels ($3.59); Tongshan No. 9 mixed, 6 taels ($4.30).

Arrivals of coal during the fortnight have been:

April 4, *Ariel*, steamer, 1,942 tons Miike dust coal; to consumers.
April 4, *Chingping*, steamer, 700 tons Kaiping coal; sold to arrive.
April 4, *Aberyswith Castle*, 1,559 tons Wollongong; sold to arrive.
April 12, *Hsiping*, steamer, 2,000 tons Kaiping coal; to consumers.
April 12, *Eastern*, steamer, 800 tons Wollongong; for sale.
April 13, *Hector*, steamer, 1,900 tons Moji coal; to consumers.
April 16, *Fuping*, steamer, 750 tons Kaiping coal; sold to arrive.

CANTON.

Coal is called here Tai How Leng, Shin Kow Leng, Kee Leng, Lung Kwa Shin, Nam Ling, Lin Chow, and Kuk Kiang, according to the different mines from which taken.

Most of the mines are owned by Chinese companies. The Nam Ling mine is owned and worked by the Government.

With the exception of the Lin Chow and Kuk Kiang mines, which are in the Kwang Tung province, all of the mines above mentioned are in the Kwang Si province. The Tai How Leng, Shin Kow Leng, Kee Leng, and Lung Kwa mines are located near the town of Ho Yuen; the Nam Ling near the town of Nam Ling, from which it takes its name; the Lin Chow near Lo Ting Chow, and the Kuk Kiang near Yin Tack.

The above-named mines produce on an average from 40 to 50 tons per diem, with the exception of the Nam Ling mine, the output of which is about 100 tons per diem. All of the mining at present is surface; no foreign machinery is employed. As soon as water fills up the excavations, they are abandoned and new ones commenced. It is therefore impracticable to give a fair idea of what the output would be if the mines were properly worked.

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[1] Also in Consular Reports No. 225, June, 1899.

No foreign firms handle Chinese coal; it is all in the hands of native firms. About 3,000 tons stock is usually kept in godowns in or near Canton.

The prices of coal delivered in Canton run from $6 to $8 Mexican (about $3 to $4 gold) per ton for the Kwang Si coal. Coal from the Lin Chow and Kuk Kiang mines brings from $5 to $6 Mexican per ton.

None of the steamship lines use coal mined in China; all of them burn Japanese coal, which is better and cheaper for steamship use. Nearly all of the coal mined in China is used for manufacturing purposes, principally in making glass.

HUBBARD T. SMITH,
Vice-Consul.

CANTON, *May 4, 1900.*

CHUNGKING.

I have interviewed Mr. A. J. Little, who represents at this port the Upper Yangtze Steam Navigation Company, Limited (a company newly formed to run steamers on the Upper Yangtze), and he has given me in writing the following information:

> All the coal mines visited by our engineer, and all which I have sampled, from Wanhsien by land to Chengtu, up the little river and up the main river above Chungking, are poor, so [poor that in England and America, where better coal is available, they would not be worked at all. The strata in the carboniferous limestone districts are nearly always vertical (the sandstone regions per contra are horizontal) and the seams thin, 3 feet being usually the maximum worked. The coal is very impure, with a heavy percentage of ash, 10 to 20 per cent, and mixed with sulphur and iron pyrites.
>
> In default of anything better it is largely used by the population, and with forced draft will probably be used by steamers (at least on the down trips), but when railways connect this Province with the magnificent coal deposits in the north (Shansi and Shensi) it is doubtful if the Szechuan mines will pay to continue working. Still, at present, Szechuan coal is the best we have, and though deficient in carbon is a bituminous coal, whereas the Hupeh coal lower down that has been so far tested is almost useless for steaming purposes, being an impure metamorphosed anthracite, very difficult to burn.
>
> Many of the shafts in Szeçhuan go down to a considerable depth, the water being pumped by hand pumps. With machinery, they would doubtless go deeper still.

The two small British gunboats which are now on their way here are using Welsh coal, and the *Pioneer* merchant steamer, expected here in June next, is to burn Moji, Japan, coal.

GEO. F. SMITHERS, *Consul.*

CHUNGKING, *April 28, 1900.*

HANKAU.

There are no reliable statistics to be had of the coal trade of this district, and all I am able to furnish is a general idea of the coal trade and coal fields.

Up to the present time, the coal required for steaming purposes has nearly all come from Japan, and is of a bituminous quality. The amount imported during the year 1899 was about 13,000 tons, selling wholesale at 5.50 to 7 taels per ton of 2,240 pounds. The above prices are equal to $4.40 to $6.50 gold. The tariff on imported coal is 5 cents gold per ton.

The British Government has a contract with the firm of Jardine, Matheson & Co. to furnish all its men-of-war at the open ports on the Yangtze River with Cardiff coal, price per ton $10 to $12 gold. No American coal has ever been imported into this district.

Coal mining is still in its infancy in China. The mines that are open mostly belong to the mandarins, and the coal is mined by primitive methods. There are large fields of coal, both bituminous and anthracite, in the Provinces of Hunan and Sechuan. A railroad is now being built in the former Province that will afford transportation for coal from some of these mines to navigable water, so that in a short time ports on the Yangtze will be furnished with steaming coal from those mines, and I have no doubt that when the American syndicate builds the line of railway between here (Hankau) and Canton, improved machinery for mining coal will be utilized in the above mines and the price of coal will be much lower. In the winter of 1898–99, coal was as high as $8 gold per ton. The Chinese make no difference in the price of coal, whether it is hard, soft, or slack. They use large quantities of the latter mixed with clay and water and made into balls the size of an orange. It seems to make a hotter fire in the grate and retains the heat longer than ordinary coal.

There are also in Hupeh Province one or two mines of soft coal, being more of a lignite formation and little used on account of its poor quality, but of course the Chinese will use anything that will burn. The wealthier classes use charcoal in braziers for keeping themselves warm. The vast majority employ no fire for warming purposes, but all classes use coal or wood for cooking.

There are no figures obtainable to show the amount of coal consumed anually.

Mr. Williams, superintendent of a line of towboats belonging to the Hanyang Iron and Steel Works, gives the following information in regard to the Ping Hsiang steaming coal:

There is a bituminous steaming coal that can sometimes be bought at Hankau, known as the Ping Hsiang coal. This is brought from the Ping Hsiang mines, owned by the Chinese taotai, Sheng, director of the Chinese railways and telegraphs, as well as the Hanyang Iron and Steel Works. The mine is located in Kiangsi Province, near the border of Hunan Province, and not far from the city of Liling, in Hunan. It is about 50 miles from Lokkow, on the Siang River, in Hunan, to which point a railway is now being constructed from the mine. The railway is now nearly half completed, and when it is finished and the mine is developed it is expected the daily output will be about 500 tons. At present the supply is uncertain, owing to the difficulty of transportation and the incomplete state of operations. Hankau is the port of delivery for the output of this mine, and it is handled by the Ping Hsiang Coal Mine Company. The prices quoted when the coal is obtainable have been from 5.50 to 6 taels ($3.85 to $4.20) a ton. This would probably be the price delivered alongside.

The coal is reported by Mr. Williams, who uses it on the two tugboats employed by the works, to be good steaming coal. No other steamship company uses this coal.

I give the following analysis of southern China coals, by Prof. E. R. Lyman, of Shanghai:

Name of coal and locality.	Moisture.	Volatile matter.	Fixed carbon.	Ash.	Sulphur.	Variety.
Kiangsi coal:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	
Ping Hsiang	1.05	29.84	55.76	13.34	0.63	Bituminous.
Do	.98	26.45	66.42	6.16	.70	Do.
Hunan coal:						
Siangtan	5.77	26.99	52.90	14.34	2.66	Do.
Anyuan	5.25	1.58	86.24	6.93	.22	Anthracite.
Feikiang	5.41	2.92	85.78	5.89	.20	Do.
Do	4.38	7.15	79.26	9.20	1.67	Semianthracite.
Do	4.40	7.49	68.63	19.48	1.42	Do.
Do	3.82	5.78	65.98	24.42	2.54	Do.
Do	3.03	6.69	52.99	37.28	.74	Do.
Yunghsiang	2.83	9.08	70.10	17.99	.94	Semibituminous.
Do	1.57	7.05	81.96	9.42	1.90	Semianthracite.
Shingning	1.26	14.82	65.84	18.08	1.87	Bituminous.
Do	.65	14.25	57.73	27.22	2.53	Do.
Do	.96	15.76	68.08	15.20	2.29	Do.
Do	.81	19.09	61.06	19.03	2.09	Do.
Do	.89	13.81	73.56	9.74	1.82	Do.
Chenchow	2.63	12.09	77.13	8.15	1.68	Semibituminous.
Do	3.85	8.73	77.91	9.50	1.69	Semianthracite.
Kwangtong coal:						
Lochang	2.85	5.54	82.85	8.76	2.84	Anthracite.
Shaochow	1.47	11.50	80.61	6.42	1.63	Semibituminous.

Analysis of other Chinese coals, not made by Professor Lyman:

Name of coal and locality.	Moisture.	Volatile matter.	Fixed carbon.	Ash.	Sulphur.	Variety.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	
W. River Kiangsi	1.29	26.27	53.74	18.20	2.35	Bituminous.
Longking	1.65	9.90	80.77	7.68	.10	Semianthracite.
Do	1.84	12.70	76.48	8.98	.74	Compressed briquette.
Tungshan	.72	27.52	66.50	5.26	.68	Bituminous.
Do	.66	26.56	59.77	13.01	1.61	Do.
Do	.69	29.21	61.52	8.58	....	Do.
Do	.83	24.07	54.83	20.27	1.83	Do.
JAPANESE COALS.						
Ohnonra	1.36	36.22	53.01	10.41	1.12	Bituminous.
Ichimura	1.81	34.66	45.90	17.63	2.57	Do.
Daigo	3.78	37.32	48.89	10.01	.50	Do.
Miiki	.51	37.10	53.62	8.77	3.80	Do.

L. S. WILCOX, *Consul.*

HANKAU, *April 27, 1900*

NIUCHWANG.

The Chinese Eastern (Russian) Railway Company is mining in this province, but this coal is all required by its locomotives, and is not available for steamers' use.

A quantity of coal from Japan and from Tientsin is annually shipped here.

There is, however, no certainty at any given time of there being any stock of any given quality on hand, and consequently most of the steamers arrange to coal in Chefoo after leaving this port.

Messrs. Bush Brothers and Messrs. Bandinel & Co. frequently have consignments of steam coal from Japan.

J. J. FREDK. BANDINEL,
Vice-Consul.

NIUCHWANG, *April 6, 1900.*

SHANGHAI.

Coal was imported into Shanghai in 1899 as follows:

From—	Tons.	Valued for import.	
		Taels.	Equivalent in United States gold.
Japan	549,468	4,121,010	$3,008,337.30
Cardiff	31,191	233,933	170,771.09
Australia	19,584	146,880	107,222.40
Tonkin	5,083	38,123	27,829.79
Hongkong	5,183	38,872	28,376.56
Total	610,509	4,578,818	3,342,537.14
Total, 1898	547,426	4,105,695	2,873,986.50
Increase, 1899	68,183	473,123	468,550.64

In 1898, the haikwan tael averaged 70 cents, United States gold; in 1899, 73 cents.

No American coal is in use here, nor do I see any future market for it, unless for Pocahontas, or the like, which can be used on men-of-war in lieu of Cardiff coal. The nearness of the Japanese coal fields and the cheapness of water transportation give these the monopoly of supply for manufacturing plants and merchant vessels.

The tariff on coal is 5 per cent ad valorem.

JOHN GOODNOW, *Consul-General.*

SHANGHAI, *May 4, 1900.*

TIENTSIN.

Consul Ragsdale writes from Tientsin, April 15, and May 9, 1900:

Coal is produced by the Kaiping mines. Three collieries are in operation, located at Tongshan, about 50 miles northeast from Tientsin.

The coal is classified as No. 5 lump and No. 5 dust—a bituminous coal of from 3 to 5 per cent ash.

The mines produce about 700,000 tons per annum, and can produce more with improvements now in progress. The supply meets all requirements. Coal is sold by the company's own agents in Tongku, Chefoo, and Shanghai. The stock is uncertain, and prices vary from 5 to 10 taels ($3.41 to $6.83) per ton, depending on quality and market.

DUTCH INDIA.

During the year 1899, there were 100,237 tons of coal imported into Java from foreign countries, viz:

	Tons.
Great Britain, Welsh, steam	51,317
England, Newcastle, smithy	2,827
Australia, Newcastle, steam	43,696
America, Baltimore, gas	1,847
Japan, Nagasaki, steam	500
Holland, patent fuel	50
Total	100,237

From Sumatra, about 70,000 tons of Ombilien coal were imported into Java, mostly for use of the Government; thus the total importation for the year 1899 would be 170,237 tons.

The yearly consumption equals the amount of importation.

Prices for the different kinds of coals at the harbor of Tandjong Priok (Batavia New Harbor) at the present time are: Welsh and English, $9.40 per ton alongside ship, $10 per ton in bunkers; Australian, $7.40 per ton alongside ship, $8 per ton in bunkers; Sumatra (Ombilien), $5.60 per ton alongside ship, $6.20 per ton in bunkers.

The price for Japanese is not quoted, as stock is exhausted. This coal is very inferior as compared to the other kinds. Ships burn some 30 per cent more of this coal than Welsh or Australian.

No American steam coal has been imported into Java, but in the year 1899 one cargo of gas coal, 1,847 tons, was imported from Baltimore. This coal has given favorable results, but is dearer than the same quality imported from Great Britain, on account of the difference in freight.

The Ombilien coal mines of Sumatra supply a large quantity of coals. During the year 1899, 183,000 tons were delivered, as follows:

	Tons.
Royal Dutch navy	28,367
Royal Packet Company coast boats	24,782
Netherlands Mail Company	28,909
Rotterdam Lloyds Company	15,739
Cargo steamers	14,666
Delivered at the port of Emmahaven, Sumatra	112,463
Government railroad, etc., Java and Sumatra	70,537
Total	183,000

The production of the Ombilien mines is rapidly increasing. There has been an increase of 33,000 tons in the deliveries of 1899 over those of 1898. These are Government mines, and very little of the coal is exported.

Price of this coal is $6 per ton in bunkers from alongside wharf at Emmahaven.

Freights on coals from Great Britain average $4.50 per ton, and from Australia $4 per ton.

It would be well for our exporters to endeavor to obtain a footing in the market of Java, where an excellent opening exists.

B. S. RAIRDEN, *Vice-Consul.*

BATAVIA, *May 16, 1900.*

JAPAN.

YOKOHAMA.

The only impediment to a large and growing demand for American coal in these waters appears to be the high freights now prevailing. Some cargoes of "Pocahontas" smokeless coal from Norfolk have been received at Nagasaki, and I am informed that they have given satisfaction and are probably as good as Cardiff coal. Prices for "Pocahontas" at port of arrival are stated at 23 yen ($11.45) to 24 yen ($11.95) per ton, as supplied to the United States Navy. I am assured by those engaged in supplying ships that there would be a ready sale for this article at Yokohama.

Cardiff coal is now selling here, delivered aboard, at from 28 yen ($13.94) to 30 yen ($14.94) per ton.

The subject of freights to Japan is a matter for consideration by our exporters, and can not be properly discussed at this end of the voyage.

JOHN MCLEAN,
Vice-Consul-General.

YOKOHAMA, *June 13, 1900.*

JAPANESE COAL.

A large proportion of the coal used at Yokohama is obtained from Moji and Nagasaki, at an additional charge ranging from 1.50 to 2 yen ($0.75 to $1) per ton. These places are within the district of the consul at Nagasaki.

The only coal mines of importance within this consular district are located in the Hokkaido (Yesso) and are under the control of the Hokkaido Colliery and Railway Company, whose pamphlets, descriptive of the properties of the product, are herewith transmitted.[1]

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[1] Filed for reference in Bureau of Foreign Commerce.

I am informed that this company's coal, known as "Yubari," is preferred for steamers at Yokohama. Mororan and Otaru are ports for its distribution, but ample stocks are kept at Hakodate and Yokohama. Its price, of course, varies according to demand, but contracts can now be made at Yokohama, to hold good for several months, at the following rates per ton: Lump, 8.75 yen ($4.36); unscreened, 7.25 yen ($3.61), and at Mororan, for lump, 6.75 yen ($3.36); unscreened, 5.25 yen ($2.61). These prices include trimming in bunkers. This coal is largely used by the Northern Pacific, Messageries Maritimes, and other steamship lines, and is exported to Hongkong and Singapore.

JOHN MCLEAN,
Vice-Consul-General.

YOKOHAMA, *March 31, 1900.*

HIOGO.

The demand here for foreign coals of a better quality than is produced in Japan is confined chiefly to the wants of such few war vessels as call occasionally at the port. On account of its better protected harbor, Nagasaki is the principal rendezvous in Japan for foreign men-of-war, and it is there that they generally coal when in this part of the world. Considerable quantities of English coals can always be found at that port, and very recently American coal from Virginia has been introduced, of which I hear none but the most favorable reports.

It has been imported there by the China and Japan Trading Company, having an office at Kobe.

SAMUEL S. LYON, *Consul.*

HIOGO, *June 5, 1900.*

NAGASAKI.

There is no demand in this district for imported coal, other than that for the use of naval vessels. Welsh coal has been the product sold to such ships up to within a few weeks since, when a cargo of 6,000 tons of Pocahontas coal was received and found a market, clearly demonstrating that American coal may be imported and sold at Nagasaki in competition with the best Welsh article. This is offered to-day by one party, trimmed into ships' bunkers, at $10.34; and I am informed that a sale of one cargo has been effected at $12.

There were 34,513 tons imported from Great Britain during the year 1898, 33,131 tons during 1899, and 19,956 tons in the first six months of this year. It is estimated there are now 30,000 tons in open and closed storage.

Freight rates from Cardiff are said to be $8 per ton, and from the United States, $8.50, United States gold; but it is likely that under normal conditions the rates would be about $5 from Cardiff and $6 to $6.50 from the United States.

The total expense of handling a ton of coal at this port, from ship to bunkers, including storage, insurance, and an import duty of 44½ cents, will be about $1.40.

It is not likely that there will be a call in this district for imported coal other than for naval vessels, as the supply of the native article is undoubtedly sufficient to meet the local, export, and ships' demands for many years to come.

There were exported from this district during the year 1898, 1,805,363 tons, valued at $6,120,301.97.

The countries to which exports went, and the amounts, were as follows:

	Tons.		Tons.
Hongkong	809,250	Siam	2,600
China	710,353	Hawaii	1,400
British India	213,203	Australia	1,300
Russian Asia	23,286	Dutch India	737
Korea	14,320	Canada and other British America	400
United States	14,114		
Anam and other French India	8,050	Total	1,805,363
Philippine Islands	6,350		

Exports in 1899 were about 2,000,000 tons. I am unable at this time to state their destination.

I can not even approximate the amount of coal consumed in this district, as large quantities mined are shipped to other parts of the Empire.

CHARLES B. HARRIS, *Consul.*

NAGASAKI, *April 27, 1900.*

KOREA.

Korea has good deposits of anthracite and bituminous coal, but they have not been worked except in the crudest manner, and then only for the purpose of supplying the local demand of foreigners for heating fuel. Wood is very scarce in Korea, and brush, reeds, grass, etc., are employed for heating and cooking purposes as much as this material. Coal is not used at all by the natives, though their system of heating their houses (by means of flues laid under a stone and cement floor) is especially adapted to the use of the Korean soft anthracite, smokeless coal, which abounds in the region around Peng-Yang.

Coal used in Korea for manufacturing purposes, as well as for steamships, is all imported. It is Cardiff coal from Wales, or Japanese soft coal. I am told that the American coal known as "Pocahontas" is quite as good as the Cardiff, which it closely resembles. I formerly called attention to this coal, and suggested that if our Navy Department should keep a supply here for our own ships, it might result in creating a demand for it, and would save expense, as Cardiff coal sells for 20 yen ($10) per ton. Soft, dirty, Japan coal sells in Korea for from 12 to 15 yen ($6 to $7.50) per ton. Korean soft anthracite, taken out near the surface, and so friable as to be chiefly dust, costs 18 yen ($9) per ton. This dust has to be made up by hand into balls with red tenacious clay before it can be burned, making it cost when ready for use over $10 per ton. An American firm, Messrs. Townsend & Co., of Chemulpo, Korea, is now in correspondence with coal men in the United States in relation, to the advisability of shipping American coal here for the supply of the naval ships that are constantly visiting Korean ports. The Russian fleet is an especially large consumer of coal in these waters. The tariff on coal imported is 5 per cent. I think there is a limited but growing market in Korea for American soft coal, to be landed here by sailing ships direct from the United States.

I give below a table giving the imports and exports of foreign coal from the years 1894 to 1899, inclusive. As there is really no export of Korean coal, this last table refers to reexports, or rather to coal sold to ships. The table does not include the considerable item of coal used by the Russian and Japanese naval vessels, which is supplied chiefly from the stores kept by their respective Governments in depots sanctioned by the Korean Government.

Importation and reexportation of foreign coal and coke.

Year.	From foreign countries.			To foreign countries.		
	Quantity.	Value.		Quantity.	Value.	
		Yen.	United States equivalent.		Yen.	United States equivalent.
	Pounds.			*Pounds.*		
1894	7,799	48,716	$21,683	103	515	$255
1895	5,893	33,415	17,142	35	177	91
1896	11,048	76,115	40,113	1,870	20,853	10,990
1897	12,433	114,016	56,780	2,767	22,445	11,178
1898	10,925	87,036	43,344	3,155	23,737	11,821
1899	9,393	65,816	32,776	2,041	13,858	6,901
Total	57,691	420,114	211,838	9,971	81,585	41,236

HORACE N. ALLEN,
Consul-General.

SEOUL, *May 7, 1900.*

SIAM.

Little coal is used in Siam. The total consumption does not exceed 2,500 or 3,000 tons per month. Of this, about 500 tons is of medium quality Cardiff, brought from England by sailing ships which come here to load teak and other Siamese products. The Siamese navy uses practically all the Cardiff coal brought into this country. Only an occasional foreign gunboat takes Cardiff coal from this port.

The price of Cardiff coal at present is $22 to $23 Mexican, being an increase of about $4 Mexican per ton over last year's prices.

The greater part of the coal is a soft, dirty, and smoky Japanese product, which can be delivered in large quantities at $13 to $15 Mexican ($6.24–$7.20 gold) per ton, according to quality.

During the last two or three years Australian soft coal has been introduced here, and formerly sold at only 50 to 75 cents Mexican ($0.24–$0.36) per ton over the price of Japanese coal, but it is much superior to the latter and in the last year the price of Australian coal has advanced to from $2 to $3 Mexican ($0.96–$1.44) per ton more than Japanese coal, so that the price of Australian coal here to-day is from $16 to $18 Mexican ($7.68–$8.64) per ton.

An occasional small shipment of Hongay coal from Tonkin, a little Borneo coal, and also a little Indian coal have arrived here from time to time, but being all of exceedingly bad quality as steam coal, and the price being only about $1 Mexican per ton cheaper than Japanese coal, consumers have not taken to these coals and there is no demand.

No anthracite coal is used here. The reasons for the small coal trade in Siam are chiefly as follows:

Wood takes the place of coal for fuel. Originally it was much cheaper; to-day, however, wood fuel is quite as dear as coal, but the Asiatic people are very slow to change, and as it has been the custom to burn firewood for the last five hundred years, they continue to do so.

Another chief reason is that Singapore, Hongkong, and Saigon are on the main track of the big ocean steamship lines and have every advantage in freight rates, storage, and facilities for handling coal, and hundreds of thousands of tons of all kinds of coal, except American, are kept in stock in the above ports, hence steamers running to Bangkok find it to their advantage in every way to coal there.

HAMILTON KING, *Consul-General.*

BANGKOK, *May 28, 1900.*

STRAITS SETTLEMENTS.

The following will show the quantity and source of supply of coal delivered to steamers, etc., at this port during 1899:

	Tons.
Cardiff, Wales—Welsh	99,478
New South Wales—Australian	53,612
Moji, Japan—Japanese	181,391
Calcutta—Indian	57,194
Labuan—Borneo	6,987
Norfolk, Va.—American	4,232

It will be observed from the above statistics that the Japanese coal delivered is nearly double the Welsh. No doubt this is due to the cheapness of this fuel.

The following are the current prices: Welsh, 42s. 6d. ($10.34); Australian, 29s. ($7.05); Japanese, 24s. ($5.84); Indian, 23s. ($5.60); Borneo, 21s. ($5.11). American, no stock.

The Borneo Company, Limited, is, I understand, the only firm in Singapore which has ever introduced American coal. The description imported is known as "Pocahontas." Unfortunately, the cost of transport prohibits it. Only one cargo was imported, and it was nearly all sold to the United States Navy. Were cheap transport readily obtainable, an important development in this branch of the coal trade would be assured.

Regarding Borneo coal, it would be well to mention that the mines of the Labuan and Borneo Company, Limited, at Labuan, are now being considerably developed, and in a short time it is hoped that something like 5,000 tons per month will be available to bunker steamers trading in the Far East. A considerable quantity of this coal has already been exported to the Philippines, I believe, for the use of the United States Navy, and this, I think, speaks well for this newly developed field. It may be that the coal fields of Borneo will, in the near future, be an important factor to be reckoned with as regards the trade of of Singapore.

The stock of coal at this port averages 120,000 tons.

There are no mines within this consular district, nor are tariff or other restrictions imposed upon importations into the ports of this colony.

R. A. Moseley, Jr.,
Consul-General.

Singapore, *May 1, 1900.*

TURKEY IN ASIA.

BEIRUT.

I have little to add to my remarks on the coal question published in Advance Sheets of Consular Reports No. 675, March 12, 1900.[1] The price of coal is still rising. Coal retails at present in Beirut at $9.64 per ton for briquettes and $11 per ton for soft lump coal. The total consumption in Beirut and vicinity does not at present exceed 30,000 tons per annum, consisting principally of patent fuel (Cardiff briquettes), but coal merchants here also buy for Port Said and Syrian ports other than Beirut. Silk factories, railroads, and vessels are the chief consumers.

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[1] Also in Consular Reports No. 236, May, 1900. In this report the consul said: "Negotiations are being carried on between Mr. Michel Ghalie, of the firm of Pharaon & Co., and houses at home concerning the question of coal. This firm disposes annually of about 100,000 tons of patent fuel (Cardiff briquettes) and Cardiff coal (soft), of which about a fifth is sold in Beirut, while the rest goes to other Syrian ports and to Port Said. Mr. Ghalie informs me that nearly all the coal consumed in the interior consists of Cardiff briquettes (rectangular pieces of pressed coal and pitch weighing 5 to 8 kilograms each), as they can be carried more safely

There are coal mines in Syria, but they are not worked, and the merchants are turning their eyes toward the United States for coal on account of the famine in Europe. Mr. Magelssen, United States vice and deputy consul here, secured a sack of coal from a passing New York steamer, as American coal was absolutely unknown here, and the firm which tested it says "it proved to be of good quality, and if America can furnish briquettes of that quality of coal there is no doubt that contracts could be at once secured, but a sample briquette should be sent from America first." The favored mark of briquettes is "Locomotive Merthyr;" other kinds are called "Star," "Crown," "Anchor," etc., all from Cardiff.

No restrictions exist further than the 8 per cent ad valorem import duty.

As to transportation facilities, there is a direct line of steamers managed by Barber & Co., Produce Exchange, New York City, giving favorable rates.

The freight from England now averages $3.50 per ton.

Several firms here are now corresponding with the United States in regard to coal, among them Mr. Fr. Wehner.

G. Bie Ravndal, *Consul.*

Beirut, *April 9, 1900.*

ALEXANDRETTA.

As this is not a manufacturing district, little coal is used. At Alexandretta, there are two factories for the pressing of licorice root that use each year about 350 tons. This coal comes from Lancashire and Cardiff. Last autumn, the Lancashire cost here 25s. ($6.08); now it is listed at 33s. ($8.02). The Cardiff was 32s. ($7.79); now it is listed at 42s. ($10.22).

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and without much waste on camels. This patent fuel used to cost f. o. b. Cardiff 9s. to 10s. ($2.19 to $2.43) per ton. Last year the price was increased to 11s. to 14s. ($2.68 to $3.41), and now it is held at 18s. to 22s. ($4.38 to $5.35). The freight used to average 8½s. to 10s. ($2.07 to $2.43) per ton, but has gone up to 12s. to 14s. ($2.92 to $3.41). Coal, Mr. Ghalie says, that has been bought at Cardiff for 11s. to 12s. per ton is now hardly obtainable at 30s. ($7.30), on account of the spreading coal famine in Europe. Cardiff dealers would allow 2½ per cent discount for cash. American coal companies should quote prices c. i. f. Beirut.

The small locomotive employed in filling the marsh uses about 75 tons of "briquettes" at a cost of 50s. ($12.17). These briquettes are at present listed at 60s. ($14.60). No American coal is used.

I give below an abstract of the report of Mr. Viterbo, United States consular agent at Mersine:

> The consumption of coal in this district amounts to about 3,500 tons per year. * * * The quality used, until now, has been the Cardiff in briquettes, but since the enormous rise in the prices of English fuel (the quotation three months ago was 50s. ($12.17) per ton), there has been imported, especially by the railroad, Heraclee's screened coal at 25s. ($6.08) free of charges, and I have lately closed a 1,000-ton contract at that price with the French Company, which is now working the coal mines near Heraclee, in the Black Sea. This fuel is of a pretty good quality, containing 30 per cent of gas with a guaranty of 8 per cent of ashes as a maximum.
>
> They do not work any coal mine in this district, though I have ascertained that there are some beds which could be easily worked, but they are too far from the sea; besides, the coal is a kind of lignite. The Cardiff coal commands now about 40s. ($9.73) per ton, but there has been no importation since November last, and will be none, I think, until next October. There is no visible supply and no demand. I am told that Heraclee's coal has been shipped to Trieste and as far as Marseilles.

WM. ROSS DAVIS, *Consul.*

ALEXANDRETTA, *May 3, 1900.*

ERZERUM.

In reply to Department circular of March 10, I have to report that no coal is imported into this province, and none is used. Coal mines exist, but are not worked.

LEO BERGHOLZ, *Consul.*

ERZERUM, *April 25, 1900.*

SIVAS.

No coal of any importance is used in this consular district. None appears in the return of imports at Samsoun.

Deposits of lignite and bituminous coal exist in various parts of this country, but owing to lack of enterprise, money, and means of transportation, and the difficulty of obtaining mining concessions, none are exploited.

MILO A. JEWETT, *Consul.*

SIVAS, *April 14, 1900.*

JERUSALEM.

No American coal is used in this consular district. About 3,500 tons are imported annually, coming from England and Belgium. That which comes from Belgium, 3,000 tons, is in bricks. The coal from Cardiff and Newcastle is in bulk. The Jaffa and Jerusalem Railroad consumes 1,500 tons annually, all brick coal. The remainder is used by the small mills in Jaffa, Jerusalem, and elsewhere. Coal is not used in this country for kitchen or heating purposes, either by the hotels or by foreigners in their private residences. Of the two largest of the small flouring mills in Jerusalem, one uses coal and the other uses wood exclusively. The cost of the brick coal is $10 a ton and of the Cardiff coal, $15 per ton.

SELAH MERRILL, *Consul.*

JERUSALEM, *April 27, 1900.*

AUSTRALASIA.

NEW SOUTH WALES.

The following collieries are in this district: Newcastle Coal Mining Company, East Greta Coal Mining Company, Cooperative Coal Company, Caledonian Coal Company, Stockton Coal Company, Greta Coal Company, Wickham and Bullock Island Coal Company, Newcastle Wallsend Coal Company, Australian Agricultural Company, Scottish Australian Mining Company, Pacific Cooperative Steam Coal Company, Duckenfield Coal Company, Sneddons Collieries, Dudley Colliery, Hetton Coal Company, and Seaham Colliery. A number of small mines, employing about 50 miners each, are not included.

The collieries of New South Wales during the past year produced 4,597,028 tons of coal, valued at £1,325,798 12s. 5d. ($6,451,998.98). This is a decrease of 109,223 tons from the output of 1898, but an increase in the value of the output for that year of £53,966 1s. 5d. ($262,625.88), due to the higher prices prevailing for the coal during the past twelve months. The total output to the end of 1899 was 85,969,136 tons, valued at £53,647,004 ($261,073,144.96). The number of persons employed during the same period was 10,339.

The shale mines produced 36,719 tons, valued at £40,823 ($198,665), an increase of 7,030 tons, valued at £8,989 ($43,745), as compared with the previous years.

The average value per ton was £1 2s. 3d. ($5.41), and the persons employed numbered 184. The total output to the end of 1899 was 905,832 tons, valued at £1,908,482 ($9,287,627). That the coke industry of this colony is assuming large dimensions is shown by the fact that during 1899, there were manufactured 96,530 tons, valued at £77,130 ($375,353), or 14,318 tons in excess of the output of 1898, representing an increase in value of £12,995 ($63,240). The value of the coke produced to the end of 1899 amounted to £371,106 ($1,805,967).

Of the various coals, that produced by the Newcastle Coal Mining Company is doubtless the best for steam purposes, as proven by tests made by the railway and steamship officials; next comes the East Greta coal.

F. W. GODING, *Consul.*

NEWCASTLE, *May 7, 1900.*

COAL PRICES IN NEW SOUTH WALES.

At a conference between the managers of the various coal mines and representatives of the miners' union, held in the Chamber of Commerce, in this city, on May 19, it was agreed that the selling price of coal in this district should be raised to 9s. ($2.19) per ton on the 1st day of January, 1901, with a corresponding increase in the hewing rate. Without doubt, this agreement has prevented a long and costly strike.

F. W. GODING, *Consul.*

NEWCASTLE, *May 20, 1900.*

NEW ZEALAND.

Consul Dillingham writes from Auckland, May 12, 1900, that the best steaming coal produced in the colony is from the Westport and Hikurangi mines. The Westport mines are worked by drives, not shafts; they are situated in the Buller coalfields' reserve, in the provincial district of Nelson, near Westport. The approximate output per diem is 1,500 tons. It is shipped from Westport. Usual stocks kept are: Wellington, 2,500 tons; Auckland, 800 tons; Lyttleton, 1,000 tons.

Prices f. o. b. Westport are: Screened coal, 16s. ($3.88) per ton; unscreened, 12s. 6d. ($2.03) per ton; terms, net cash on delivery. Only vessels of small tonnage can load at Westport. For the present the demand is rather in excess of the supply.

The Hikurangi coal comes from Whangarei district, near Auckland. The present production per day is 170 tons, but it can be largely increased.

Prices are 12s. ($2.91) per ton f. o. b. Auckland.

Under date of May 29, the consul adds the following details:

New Zealand is a large producer of coal, both bituminous and anthracite. In 1878 the colony produced 162,218 tons; in 1888, 613,895 tons; in 1898, 907,033 tons.

The amount of coal imported into the colony during the year ended December 31, 1898, was:

	Quantity.	Value.	
		English money.	United States money.
	Tons.		
From New South Wales	115,418	£105,203	$511,970
From Victoria	4	15	72
From United States of America (east coast)	5	5	24

EXPORTS.

	Tons.		
To United Kingdom	82,728	£81,746	$154,491
To Victoria	....	....	....
To New South Wales	9,492	7,054	34,326
To Queensland	395	281	1,367
To British Columbia	1,863	1,595	7,741
To United States of America (west coast)	1,740	1,431	6,963
To Fiji Islands	6,758	5,500	26,545
To South Sea Islands	12,123	9,925	48,229
To Norfolk Island	90	107	827

The different classes of coal mined during 1898 were as follows:

	Tons.
Bituminous	538,477
Pitch	36,432
Brown	298,365
Lignite	33,759

The number of coal mines in operation was 177; total number of men employed, 2,003.

The output of coal from the various mining districts in 1898 was as follows:

	Tons.
Kawakawa and Hikukangi	53,449
Whangarei, Kamo, Ngunguru, and Whauwhau	17,285
Waikato	66,125
Mokau	3,148
West Whangarei	908
Westport	298,551
Reefton	2,865
Greymouth	128,676
Malvern	13,710
Otago	212,292
Southland	43,704
Total	840,713

The approximate total output of coal up to December 31, 1898, was 12,483,646 tons.

TASMANIA.

There is a demand here for imported coal. In 1899, 52,600 tons of coal, besides 21,870 tons of coke, were imported. In addition to the above, the consumption included about 50,000 tons of local coal.

The kinds needed are those suitable for gas making and for steam purposes, both good quality. The local coal is used only for domestic purposes and on the Government railways. Practically, the whole of the coal and coke is imported from New South Wales.

The cost, duty paid, 72 cents (3s.) per ton on round and 48 cents (2s.) on small, is about $4.62 (19s.) per ton round and $3.64 (15s.) small. Coke is exempt from duty.

No American coal has been imported here and no coal is exported.

In view of the foregoing facts, it seems most improbable that American coal can find a market in this colony.

A. G. Webster, *Consul.*

Hobart, *May 10, 1900.*

VICTORIA.

No possible opportunity could exist here for the introduction of American coal, the demand being entirely supplied by the local mines and by those of Newcastle, New South Wales, distant some 700 or 800 miles, from which port large quantities are shipped annually to the Pacific coast.

THOS. W. STANFORD,
Vice and Deputy Consul-General.

MELBOURNE, *May 21, 1900.*

POLYNESIA.

HAWAII.

The Hawaiian Islands have no coal deposits and consequently have to import all they use.

Nearly 90 per cent of the coal consumed here for commercial purposes comes from British Columbia, Australia, and Japan. This is accounted for by the difference in freights, and the ignorance on the part of the consumers of the superior steaming qualities of our coals.

For the year 1899, 124,047 tons were imported, valued at $336,935.20. Of this amount, 10,252 tons, costing alongside the dock at Honolulu $65,305.50, were imported by the United States for the use of naval vessels and army transports. The value of the rest represents the cost at the mines and does not include the freight.

The following shows the quantity and value imported from the several countries during the year 1899:

From—	Tons.	Value.
United States	25,857	$103,588.89
British Columbia	16,955	62,833.50
Australia	78,806	163,781.40
Great Britain	854	2,597.03
Japan	1,575	4,134.38
Total	124,047	336,935.20
Imported by the Army	1,980	15,840.00
Imported by the Navy	8,272	49,465.50
Total	10,252	65,305.50

The Navy coal all came from the Pocahontas or Cumberland mines, while that for the Army was Australian.

To show the increased demand during the past five years, I insert the figures of the imports for the year 1894, showing an increased consumption in 1899 of over 100 per cent.

From—	Tons.	Value.
United States	658	$4,154.66
Australia	39,401	81,105.95
Great Britain	3,124	7,096.60
Japan	700	3,342.50
British Columbia	16,410	73,140.15
Germany	700	2,100.00
Total	60,993	170,939.86
Imported by the Navy	2,000	14,764.00

The coal which comes from British Columbia is Wellington, Comox, and Nanaimo. The cost alongside the docks here is from $8.50 to $9 per ton.

That from Australia is Wallsend, Cooperative, Seaham, West Wallsend, Pacific Cooperative, Duckinfield, Greta, Wallarah, and West Port. The average cost of this coal delivered here is from $7.70 to $8.25.

The prices are those at the present time, when freights are unusually high.

To show how poor some of this coal is, it is said here that one of the above mines was originally opened for slate and the product sold as such, but was changed to a coal mine because of an increased demand for coal. I can not vouch for this, but none of the above can compare with our Pocahontas, Cumberland, and Elk Garden coals.

A week or two ago, the commandant of the naval station here received a cargo of Pocahontas coal which had been damaged on the way out by fire and salt water. Wishing to test its steaming qualities, he had some used on the Government dredge. The report of the engineer was very complimentary. He said that very little ash was left, and he succeeded in obtaining more steam with one boiler than he had hitherto obtained with two. He considered the Pocahontas had more than double the steaming power of the coal he had been using, for which he had been paying $8.50 per ton.

The last coal sent by the Navy cost, delivered, $7.75 per ton.

The great drawback to the introduction of American coal from the East has been its greater cost and an ignorance of its superior steaming qualities. Under Hawaiian laws, coal has been free. When our tariff is in force, it would be a good thing for Eastern producers to have a representative here, to teach the consumers that they can afford to pay a higher price for our best coal.

The demand is steadily increasing. All the coal should come from the United States, and I believe it will when the canal is built.

WILLIAM HAYWOOD,
Consul-General.

HONOLULU, *April 11, 1900.*

SAMOA.

The only coal used here is by the war ships. There is no chance for American coal, as it can not compete in price with the Westport and other New Zealand products, which, on account of nearness, are comparatively cheap here.

L. W. OSBORN, *Consul-General.*

APIA, *May 8, 1900.*

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56TH CONGRESS, } HOUSE OF REPRESENTATIVES. { Doc. No. 741,
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SPECIAL CONSULAR REPORTS.

VEHICLE INDUSTRY IN EUROPE.

VOL. XXI—PART II.

REPORTS FROM CONSULAR OFFICERS IN ANSWER TO A CIRCULAR
FROM THE DEPARTMENT OF STATE

Issued from the Bureau of Foreign Commerce,
Department of State.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1900.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.[1]

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—Commercial Relations, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—Consular Reports, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—Advance Sheets, Consular Reports, issued daily except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—Exports Declared for the United States, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—Special Consular Reports, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as Consular Reports No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications, except Tariffs in Central America, etc., are exhausted and the Department is therefore unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled Special Consular Reports. There are now the following Special Consular Reports:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries.

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries.

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour.

Vol. 11 (1894).—American Lumber in Foreign Markets.

Vol. 12 (1895).—Highways of Commerce.

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; Cultivation of Ramie in Foreign Countries.

Vol. 16 (1899).—Tariffs of Foreign Countries: Part I. Europe; Part II. America; Part III. Asia, Africa, Australasia, and Polynesia.

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper Trade in Foreign Countries; Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. Stave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe. Part III. Foreign Trusts and Trade Combinations.

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[1] Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State July 1, 1897.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department. There was also published in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Deparments, and war decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly who change their addresses should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to CONSULAR REPORTS, including COMMERCIAL RELATIONS, should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

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DEPARTMENT CIRCULAR.

Department of State,
Washington, March 5, 1900.

To certain consular officers of the United States:

This Department has been requested by one of the large firms in the United States engaged in manufacturing vehicles to procure certain statistical information in regard to the vehicle industry in Europe. It is desired that your report shall cover the following points:

1. The particular localities in the territory within the supervisory jurisdiction of your office where the manufacture of vehicles is an industry of importance.
2. The total number and general styles manufactured per annum.
3. Capital represented.
4. Capacity and earnings of employees.
5. Names and addresses of leading manufacturers.

The firm mentioned wishes to ascertain by these inquiries the condition of the vehicle industry in 1800, in 1850, and on January 1, 1900. You are also requested to give general statistics and information in regard to the automobile, showing, if possible, the number manufactured and names and addresses of leading manufacturers, the number in use, and any general information regarding the popularity of the vehicle and the common opinion as to its future.

In asking you to make the report above outlined the Department does not expect you to go into the historical part of the subject exhaustively. It is thought that it would be of much greater interest to the business public if you would deal largely with present conditions, showing the actual extent of American competition in the markets of Europe.

I am, sir, your obedient servant,

Thos. W. Cridler,
Third Assistant Secretary.

VEHICLE INDUSTRY IN EUROPE.

AUSTRIA-HUNGARY.

AUSTRIA.

VEHICLE INDUSTRY.

Condition of the industry in 1800.—At the close of the eighteenth century, carriage building in Austria may be said to have been in its most flourishing condition. Vienna was then, as now, on the highway to the principal European countries, and it was there that the nobility bought their carriages, and the great state kept by the Austrian emperor and court created an ever-increasing demand for gala coaches. The coach builders belonged to a guild, and as early as 1770 laws were passed regulating the number of apprentices and conditions of employment. The time fixed was three years apprenticeship, and four if the master provided clothing for his apprentice. The journeyman, before settling down in Vienna as a master, must have traveled about for three years after completing his apprenticeship, and, after the "Wanderjahre," have served two years under a Vienna master and be so perfect in his work as to satisfy his examiners. The final trial pieces were a three-wheeled wagon upon which 40 casks of wine could be drawn, a miller's wagon capable of drawing 2 quarters of wheat, and an axle wagon and a wheelbarrow, including wheels.

The following sorts of carriages were made: Flies, balloon flies, trussed flies, cabriolets, phaëtons, two and four seat landaus, two and four seat floating coaches, Chinese coaches, and for heavy goods, rack wagons, open vans, builders' carts, small carts of all kinds, sledges, munition and heavy wagons for the army, carriage blocks for cannons and gun carriages. Early in the nineteenth century the vehicle trade made great strides; there were 48 master coach builders and 27 assistants or managers who had over 200 journeymen under them, and, of course, a larger number of apprentices. The chief masters were Hahn, Echtler, Semler, Eder, Graf, Kautzner, Kiener, and Eberle. In Austrian Poland, in Moravia and Bohemia, not to mention Hungary and Transylvania, large quantities of carts, peasants' vans, and sledges were made, and the better work was made in such towns where German saddlers were to be found; and one man, Herr Fink, of Bregenz, was distinguished for the excellent coaches, chaises, and landaus which he made, and especially for the fact that the bodies were made of a smaller quantity of wood than used by other firms. Peasant carts were not put on the market for the fact that they were manufactured according to individual taste, and in the towns or villages where they were required. The prices were about the following: For an ordinary frame and wheels, without fittings or body, $28; the frame of a calash (called by the coachmaker a weak frame), from $16 to $20; the best four-seat frames from $32 to $36; an ordinary calash body, unfitted, from $16 to $18; floating shape, $32 to $36; a four-seat body, $36 to $40; a wheelbarrow cart, $4, and a van, including ladder, $28. No prices are given of ordinary vehicles, for they were generally put together by the blacksmith, who either received the parts from his customer who may have bought or made them, or bought the parts separately of the makers.

The trimmer acted the part of supplier in most cases, even for the better class of vehicles. He employed the coach builder, who supplied the frame, wheels, and body; the blacksmith, the locksmith, and all other necessary persons who never in any way came in contact with one another. The trimmer paid the wages and received price of carriages from his customers. The chief sorts of vehicles supplied in Austria by the trimmer were the so-called Styrian coaches, of which there were three kinds, ordinary, cushioned, covered or uncovered, for mountainous districts; covered vans, small and large hunting vehicles, "society" carriages with double seats, barouches, a kind of Chinese cart driven by the owner, all of which were for the towns; calashes for town and country, or for journeying, and a special kind of Turkish calash with high roof and wood carving covered with gold and ornamented with bronzes and painted figures. The "Pritschken" or ordinary traveling coach was the favorite, because not only were passengers safe in them, but they were also more convenient for packing, and besides the traveler could lie down at full length; then there were landaus, state carriages, carriages answering to our modern brakes for from six to twelve persons, and diligences. So from this it will be seen that the chief trade lay in the hands of the trimmers.

A prosperous trade was done with Russia, Balkans, Germany, and other countries where Vienna-made coaches were much in favor.

The industry in 1850.—By 1850 the home manufacture of private carriages had become a very prosperous one, but the manufacturers complained that a large quantity of the necessary materials came from other countries—axles, leather, silk, cloths, and all materials for trimming the carriages. All kinds of vehicles continued to be exported from Austria to Russia, the Orient, and the principalities of the Danube. The chief trade was still in the hands of the trimmers who alone came in contact with their customers. The chief firms were Brandmeyer, Engel, Koller, Lechner, Laurenzi, in Vienna, and Kubal, in Prague. The chief coach builders were Armbruster. Carl and Franz

Brandmeyer, Joh. B. Engel, F. Huber, Jacob Lohner, C Marius, Jos. Moser, and Ferdinand Ott, all in Vienna, and in addition to those trimmers already mentioned there were between 160 and 170 less important ones. The total annual production, including traveling and private carriages, was 2,000, and their worth $400,000. The post vans numbered somewhat over 200, their worth being $63,200. In addition to these a number of omnibuses were manufactured by J. Spiering, Vienna, and J. Rohrbacher, in Ober-St-Veit, near Vienna.

Present condition of the industry.—For some years a depression in the vehicle industry in Austria has existed. There has been a large falling off in the exports from Vienna. The Hungarians, who previously were her largest customers, now buy almost entirely from their own manufacturers. Formerly all the nobility and aristocracy of Hungary, Bohemia, and Moravia bought their private and gala carriages here, but this is not now the case. Carriages made in the provinces are inferior to those manufactured in Vienna, but are much cheaper, and have found their way, to some extent, into foreign markets. Even in the fifties these inferior goods began to make their way into the Levant and especially to Constantinople. In consequence of their poor quality, for they were put together as quickly and as cheaply as possible, these goods were soon brought into bad repute, and the Viennese manufacturers lost much trade with Constantinople, and only lately have the Turks again begun to buy.

Till the customs war in July, 1886, Russia and particularly Roumania were customers for Austrian vehicles. Since then trade with the latter country has dwindled, and owing to the continual increase of Russian duty on vehicles the export thither is becoming smaller. The failure of the export to Roumania touches Austria the most, for Roumania was one of her largest customers, and this is a loss that will never be regained, for Roumania revenged herself for the customs war which lasted so long by inviting trimmers and work people to settle in her land and set up their own manufactories. Vehicles are still exported to Egypt, British India, Java, and even to North Germany and Sweden, as well as to Australia, Chile, South Africa, and Argentina. Such export trade is owing to the individual efforts of a few manufacturers, although the Vienna carriage is celebrated for its good quality and fine workmanship. There is, therefore, ground for the complaint that the vehicle industry in Austria, as far as the export trade is concerned, is on the decrease. The inland trade also suffers from competition, particularly owing to the preference for French-made carriages. Although the Austrian vehicles are inexpensive, profits are low, and notwithstanding the cost of materials used in manufacture is continually rising, the prices for manufactured goods are, in consequence of the competition, stationary. The introduction of rubber tires for carriages and vehicles of all kinds has also caused a loss to the manufacturers and their journeymen. Many of these tires are imported from France, though a continually increasing quantity is being manufactured here. A general evil, too, is the long credit which must be given, and this, of course, falls most heavily on the smaller manufacturers.

The worst blow to the manufacturers of vehicles here was, perhaps, the establishment of a factory under Government contract in Klosterneuberg, near Vienna, for the production of military wagons, ambulances, and vehicles required for the army. This trade was previously in the hands of the coach builders here, but since the seventies the Government has manufactured on its own account. In Hungary the production of army transports and vehicles is entirely in the hands of the private manufacturers. In spite of all these difficulties, a few firms have increased their premises and by dint of great exertion and personal pecuniary loss have brought the vehicle trade to a higher level, and they hope that in a short time it will be thoroughly restored.

As far as vans, carts, and country vehicles are concerned, they are still made by the local wagon maker as they were a hundred years ago.

VEHICLE MANUFACTURES.

Vehicles are made in Prague and Pilsen in Bohemia, and Brunn and Nesseldorf in Moravia, but the chief manufacturers are in Vienna—namely, S. Armbruster, J. Lohner & Co., A. Weiser & Son, Karl Marius, Schwanzer, Johann Weitzer, Lehmann & Leyres, the Maschinen und Waggon-Baufabrik-Actiengesellschaft, and Schuster & Co. The Nesseldorfer-Wagenbau-Gesellschaft is in Nesseldorf, Moravia, Rudolf Fuchs in Brunn, Moravia; P. Klubel & Co. and Jacob Raubitschek (basket carriages) in Prague, Bohemia; W. Brozik & Son in Pilsen, Bohemia. The following are purveyors to the Imperial Court of Austria: J. Lohner & Co., S. Armbruster, Peter Klubal, and W. Brozik & Son, while A. Weiser & Son are purveyors to the Shah of Persia.

VEHICLES MANUFACTURED.

The following fine carriages are made: Parisian, Stanhope gigs, tilburys, roofed and unroofed dogcarts, phaetons, basket phaetons; Derby carts, T-carts, hunting carts, phaetons with basket-work panels, hunting phaetons, sand runners, char-à-bancs, mail phaetons, spider with and without tops, ladies' driving phaetons, pony basket phaetons, hunting wagons, American char-à-bancs, victorias, cabriolets with and without tops, full-sweep victorias, spring victorias with rumbles, basket sociables for four persons, barouches, sociables with tops, sociable double tops, spring barouches, spring landaus, miniature landaus, full-sweep landaus, landaulets, four-wheel cabs, rockaways, broughams, single broughams, chariots, spring broughams, coupés, clarence coaches, wagonettes, breaks for six, seven, nine, and twelve persons, light and heavy drags, four-in-hand breaks, stable breaks, small and large; omnibuses for four and six persons, and Russian and Albany sledges.

The following business vehicles for hand and horse: Handcarts for delivery of food and goods, such as sewing machines, bicycles, and the like; double-roofed handcarts without springs for taking away refuse for hospitals; the same with portable doors; covered handcarts with springs to open at the top or side; the same with galleries, length 4 feet 8 inches, height 2 feet 4 inches; advertisement handcarts with revolving wheels for the inscription; two-wheeled vans, with place for two persons and cupboard for goods; these are made in various sizes; transport vans for flowers, open one-horse vans with or without wooden galleries, beer vans with doors at the side and back and place for two persons, two-horse baggage wagons to open at the top and behind, also for beer (capable of holding about 700 bottles); hotel omnibuses, ice wagons for 48 blocks and with three double doors, ice wagons for 70 and 80 blocks, two-horse ice carts for 5,280 pounds of natural ice, parcel carts, family omnibuses, plateau wagons for two and four horses, hotel breaks, milk carts for bottles and cans, goods wagons of all kinds, furniture vans for street and railway, street omnibuses, tram cars and fiacres.

PRODUCTION AND WAGES.

It is impossible to give annual production, for no statistics are to be had and the manufacturers refuse to give them. They are not even entered at the chamber of commerce. Exact statistics as to capital invested are practically impossible to obtain. The manufacturers refuse to give particulars.

There is a singular fear existent that a knowledge of statistics will cause either competition or depression in the respective trades, and those who make the inquiries are looked upon askance. Those firms who very kindly gave some details will be here mentioned.

S. Armbruster, Vienna, IX Porzellangasse. Business commenced in 1841. Premises enlarged and new buildings added in 1888–89. Yearly production, about 300 vehicles. Export to India, North and South America, Brazil, Egypt, Cape Town, and Australia. He obtained first prize at Paris, 1867; Vienna, 1873; Philadelphia, 1876; Paris, 1878; Vienna, 1880; Melbourne, 1881; Trieste, 1882; Adelaide, 1887; Melbourne, 1888; Sydney, 1888; Budweis, 1889; Vienna, 1890; Chicago, 1893, and Vienna, 1892, 1894, and 1898. Here, there has been no strike since 1872. Wages average from $3.60 to $10 weekly. Working hours, ten; workmen paid per day or by piece. There is a pension fund for aged work people.

Jacob Lohner & Co., imperial purveyors, Vienna, IX Porzellangasse. This firm commenced operations in 1821. The factory is now in Floridsdorf, near Vienna. At first the firm only manufactured articles of luxury, but now every kind of vehicle is produced. Here, nearly all the ambulance vans for inland and export trade are manufactured. Medals: Vienna, 1845; London, 1851; Munich, 1854; Paris, 1855; Stettin, 1865; Paris, 1867; Moscow, 1872; jury, Vienna, 1873; Brussels, 1876; Philadelphia, 1876; Paris, 1878; Melbourne, 1880; Vienna, 1880; jury, Trieste, 1882; Berlin, 1883; Scheveningen, 1892; Chicago, 1893; and Rome, 1893.

W. Brozik & Son, Pilsen, Bohemia, imperial purveyors. Business commenced in 1867. Manufacture all kinds of equipages, electric carriages for the streets, and electric tram cars. Export to Russia, Germany, France, and the Orient. Amount unknown.

Peter Klubal & Co., Prague. Established 1876. Production between 100–150 yearly. Number of employees, about 60.

Nesseldorfer Wagen-Bau-Fabrik Gesellschaft, Nesseldorf, Moravia, manufacturers for the imperial house by letters patent. This company has a workmen's colony. The dwellings vary in rent from $12 to $24 per year. Wages of laborers average from 32 to 36 cents a day; journeymen earn from 60 cents to $1.20 daily. Sixteen hundred work people are employed, and about 600 carriages are manufactured yearly. This manufactory was carried on from 1850 under the name of Schustala & Co. till some five years ago, when the above company was formed.

RAW MATERIALS.

Although Austria is dependent on other countries for many of her raw materials, she buys nothing but a small quantity of leather and a moderate amount of hickory wood from the United States. And even with regard to these two items there are no statistics. These might be obtained only from the different manufacturers, who, for obvious reasons, refuse to give them.

AUTOMOBILES.

The automobile trade, although still in its infancy, is developing rapidly. Two years ago automobiles were little known here, but since that time they have been manufactured in Austria. In 1870 Herr Siegfried Marcus, of Vienna, drove a benzine motor car. By far the best known amateurs are Count Wilczek, jr., and Count Siegfried Wimpffen, who together brought a steam carriage propelled by coke to Vienna. Franz Ritter von Liebig, of Reichenberg, and Herr Häuser, of Garning, were the first to have benzine automobiles, and an engineer, Professor Czischek, of Klagenfurt, in 1886, built a steam tricycle with petroleum to drive it.

Thanks to the former prime minister, Count Badeni, who was convinced of the value of automobiles by Mr. J. Lohner, the way was made easy for them as far as the police and magistrates were concerned. In twenty-four hours after the matter was laid before him, the necessary permission for their use in the streets of Vienna was given. This was some four years ago, and now they are allowed everywhere, even in the Prater, the great park of Vienna. The press has come to the help of the automobiles, giving a separate column to them, and the second automobile race was held in Vienna in May. There is, however, one great hindrance to the use of the automobile in the provinces, for benzine is not much used, as in France, and, besides, the sale of it is in control of the police, who are very strict in regard to it, so it can rarely be bought in sufficient quantities except at high retail prices. But efforts are being made, and will be successful, to enable purchases of benzine to be made at convenient places and at moderate cost.

There is now an automobile club in Vienna of which Count Gustav Potting-Persing is the president. This was started in 1899 and has many members. There are also two papers in Vienna devoted to automobiles, Mittheilungen des Oesterreichischen Touring Clubs und Automobil Clubs and Allgemeine Automobile Zeitung.

Automobiles are made in Vienna, and Baden near Vienna, in Moravia, at Nesseldorf, and in Bohemia, at Prague, and Pilsen. The various firms are herewith mentioned:

Accumulatoren-Manufacturen-Actien-Gesellschaft, Vienna, factory at Hirschwang, Lower Austria, business commenced 1898; no particulars obtainable as to capital or output. System is Tudor for traction purposes.

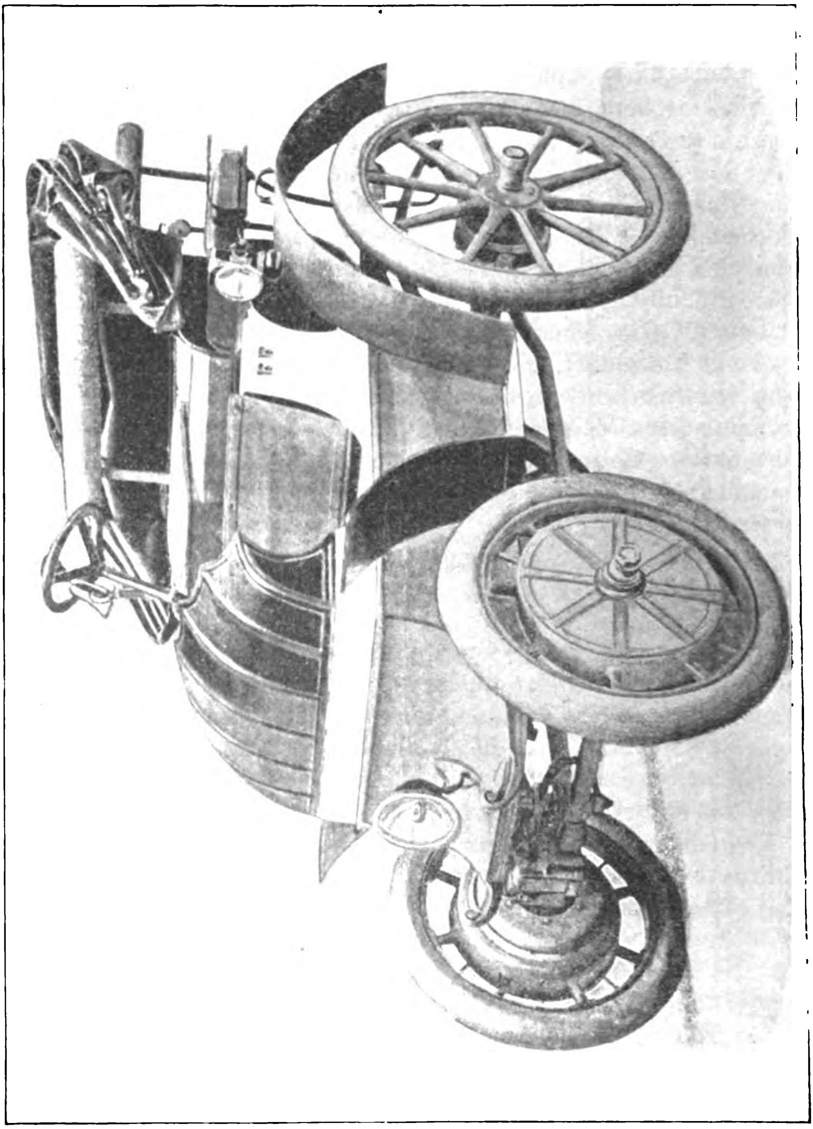
Armbruster, k. u. k. Hof-Wagenfabrik, Vienna, commenced manufacture of automobiles in 1898. All kinds of carriages for automobiles made.

August Braun & Co., Vienna, business started in 1897. Make "Favorite" victoria voiturette, 2½ horsepower, weight 264 pounds.

Franz Heimel, Titan-Accumulatoren-Fabrik, Vienna, business commenced 1898. Make Titan accumulators for automobiles and tramways. Their normal carriage battery has 44 cells, weight 1,100 pounds, 230 ampere hours at 25 ampere electric current.

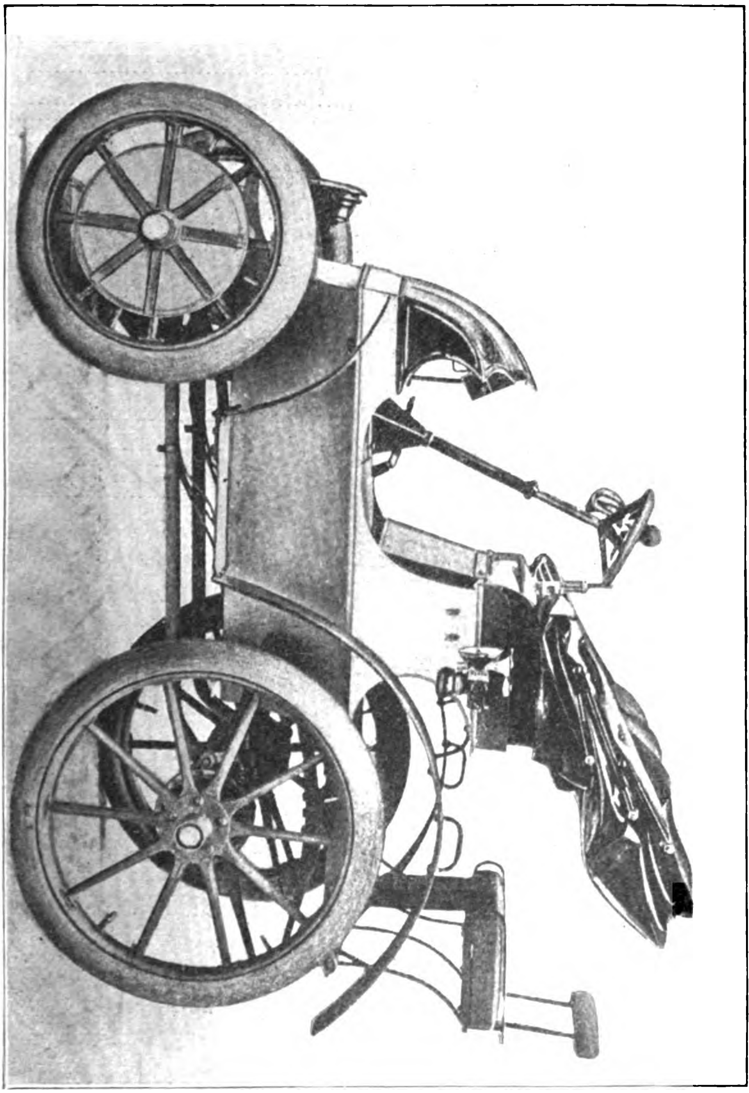
F. Kröttlinger, electrotechnic, Vienna. New Rumkorff induction apparatus for automobiles, with one-half ampere electric current instead of 1½ ampere as formerly.

Jacob Lohner & Co., Vienna, factory at Floridsdorf, near Vienna. This is the only firm which manufactures Austrian electric automobiles now being exhibited at the Paris Exposition. Details can not be given as Herr Porsche, the constructor, has not yet received his patent in Austria, Germany, and America, though it is patented in Hungary and France. The vehicle has two motors, one in each front wheel; each of these has 2.5 normal horsepower, which can be raised to 3.5 horsepower and even as high as 7, but not for any length of time without danger of overheating. This equals an 8 horsepower benzine motor car. These cars do not slip in wet weather as the vehicle is drawn and not pushed. The weight is 2,046 pounds, of which the battery, containing 44 cells, weighs 902 pounds, and each complete motor wheel 242 pounds. The normal rate of traveling is 18.6 miles an hour, but at 80 volts a speed is attained of from 36 to 37 miles an hour. One filling of the battery lasts for 62 miles, but the inventor intends that the vehicle shall carry its own loading station so that during the journey a new electric current can be started which will enable it to travel 93 miles at a stretch.



Front view.

Accompanying are drawings of J. Lohner's electro-mobile Lohner-Porsche, model No. 27, a three-seated phaeton; price, without top, $1,500.



Side view.

Price list of Lohner-Porsche electromobiles.

CARRIAGES WITH TWO MOTORS AT 2.5-HORSEPOWER NORMAL CAPACITY.

[Each capable of surcharge to 7 horsepower.]

No. of model.	Description.	Value.
27	Three-seat phaeton without roof	$1,500
	Four-seat phaeton without roof:	
2	Battery slipped in	1,540
26	Battery hung up	1,540
23	Mylord, battery hung up (Mylord body exchangeable for coupé body No. 34)	1,600
34	Coupé, battery hung up (coupé body exchangeable for Mylord body No. 33)	1,700
33, 34	Combined carriage with Mylord and coupé body	1,860
35	Mylord, battery slipped in (Mylord body exchangeable for coupé body No. 36)	1,600
36	Coupé, battery slipped in (coupé body exchangeable for Mylord body No. 35)	1,700
35, 36	Combined carriage with Mylord and coupé body	1,860
20	Landau	1,880
10	Six-seat break without roof	1,660
11	Six to eight seat omnibus	2,000
25	Ambulance for two litters with slip arrangement "Dietrich-Lohner"	1,940
13	Merchandise and advertising wagon with cabriolet	1,840

CARRIAGES WITH TWO MOTORS AT 5-HORSEPOWER NORMAL CAPACITY.

[Each capable of surcharge to 15 horsepower.]

30	Fifteen-seat break with roof	$2,880
20	Twenty-seat omnibus	3,120
16	Heavy van carrying 5,500 pounds	2,360
31	Heavy van carrying 11,000 pounds	2,500

The Nesseldorfer Wagen-Bau-Fabrik Gesellschaft, Nesseldorf, Moravia, from 1897 to 1899 built four-seated benzine cars. They produce 125 automobiles yearly. Price of 7 horsepower, $1,600; of 9 horsepower, $1,800. Inclusive of the carriage works there are 1,600 employees, who live in the Nesseldorf colony, paying rent for their dwellings of from $12 to $24 a year.

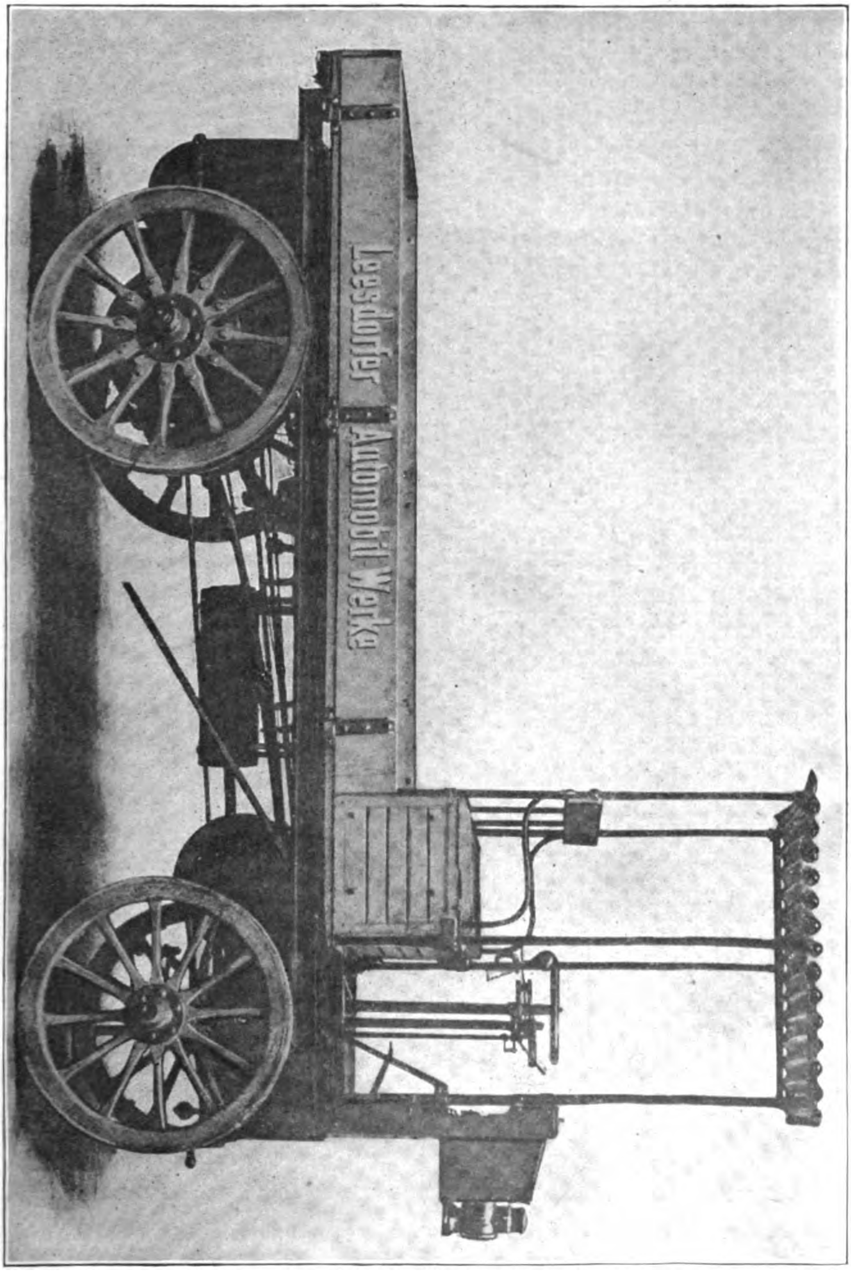
Leesdorfer Automobilfabrik Actien Gesellschaft, capital $280,000, fully paid up. The factory is at Baden, near Vienna, and occupies a space of some 18,000 square feet. Can manufacture 150 automobiles per year. The company makes only large vehicles of from 6 to 9 horsepower. All kinds are turned out, from equipages and omnibuses to heavy wagons. This factory was opened on January 1 of the present year.

Illustrations of two types from these works are given herewith.

The price list of the Leesdorfer Company is as follows:

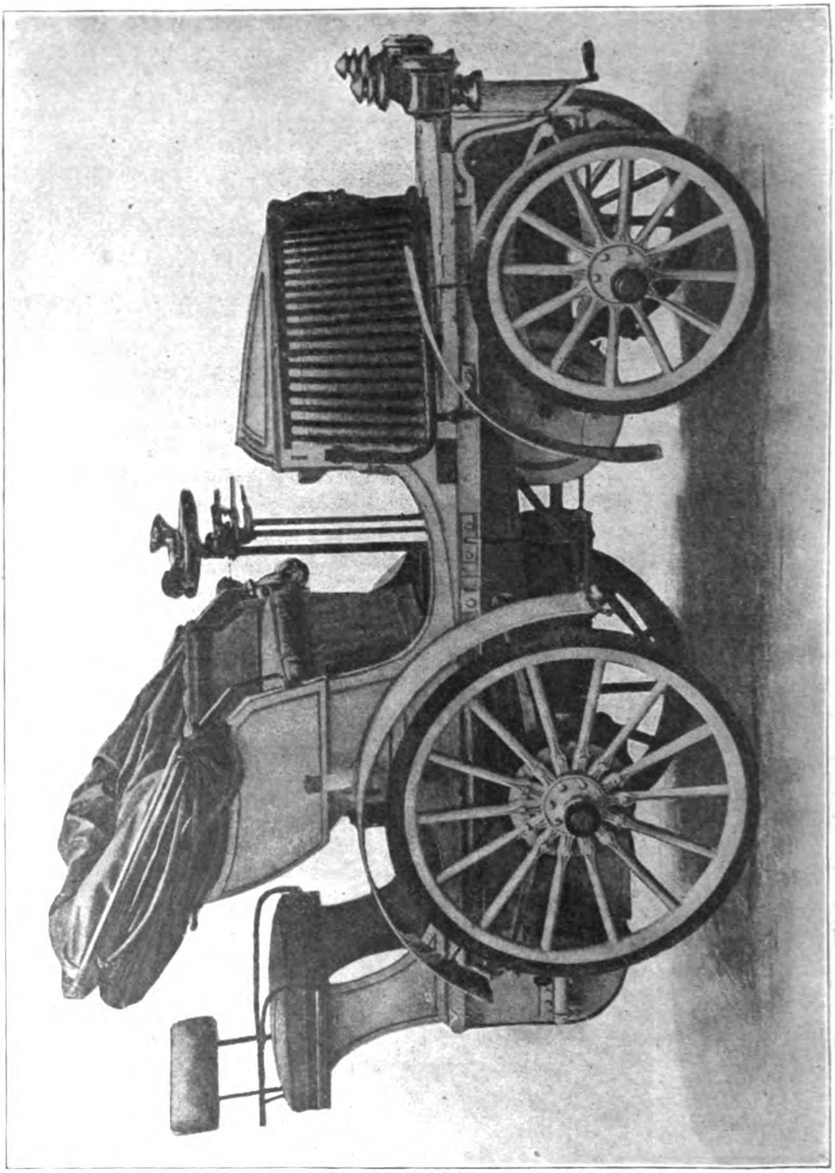
Description.	6-horse-power motor.	9-horse-power motor.
Open hauling wagon	$1,640	$2,000
Covered hauling wagon	1,840	2,240
Racing wagon	....	4,000
Petit Duc	2,100	2,500
Duc Tonneau	2,200	2,600
Phaeton	2,100	2,500
Five-seated hunting wagon	2,200	2,600
Omnibus	....	3,300
Break	....	2,600

Bierenz, Fischer & Co., Oesterreichische Daimler-Motoren-Commandit Gesellschaft, Vienna, capital $140,000, Porser-Daimler's patent.



Open hauling wagon. Patent Amedée Bollée. Price, with 6-horsepower benzine motor, $1,640; with 9-horsepower motor, $2,000.

The factory is at Wiener Neustadt, in Lower Austria, one and one-fourth hours from Vienna. The works occupy a space of many thousand square feet. The water power is equal to 35 horsepower, the steam engines to 60 horsepower. The factory was opened this spring and can turn out 100 automobiles per year.



"Petit Duc." Patent Amadée Bollée. Price, with 6-horsepower benzine motor, $2,100; with 9-horsepower, $2,500.

Goebel, Knoller & Co., Commandit Gesellschaft Automobilfabrik, Vienna. The first automobile was built at this factory in the spring of the present year. It was for four persons and driven by petroleum.

AMERICAN AUTOMOBILES IN AUSTRIA.

These are the principal manufactories in Austria. The automobiles are chiefly French in design, but Lohner and the Leesdorfer factory have their own special ones. There is a growing desire on the part of the public for automobiles as a mode of conveyance, and it is expected that the next two or three years will bring a large increase in the manufacture. The only obstacle to the general adoption of the automobile is the high price. People of small means are awaiting the advent of an inexpensive machine. American automobiles have not been on the market in Austria until recently, when there was established in Vienna an agency of a United States automobile manufactory, and it is hoped that this variety and others from the United States will exercise an appreciable part in the trade in automobiles in Austria—a trade that promises to be of great dimensions.

IMPORTS OF VEHICLES.

The latest statistics as to import and export of vehicles of all kinds are here quoted:

Imports and exports of vehicles.

IMPORTS.

Whence imported.	Number.	Value.
Heavy vans.		
England	18	....
German Empire	71	....
Italy	50	....
Roumania	61	....
Russia	17	....
Servia	4	....
Switzerland	13	....
1899	234	$31,232.00
1898	216	26,816.00
1897	288	36,976.00
1896	294	37,536.00
1895	233	33,615.00
Heavy sleighs.		
German Empire	17	....
Russia	1	....
1899	18	144.00
1898	16	93.60
1897	9	57.60
1896	14	64.80
1895	23	172.80
Passenger vehicles without leather or upholstery.		
United States	60	....
Belgium	1	....
England	3	....
France	37	....
German Empire	67	....
Italy	32	....
Roumania	2	....
Russia	2	....
Switzerland	7	....
1899	211	15,023.20
1898	116	8,259.20
1897	205	14,596.00
1896	145	10,324.00
1895	208	8,401.60

Imports and exports of vehicles—Continued.

IMPORTS—Continued.

Whence imported.	Number.	Value.
Passenger sleighs without leather or upholstery.		
German Empire	6	....
Roumania	1	....
Russia	1	....
1899	8	$416.00
1898	15	780.00
1897	20	1,040.00
1896	18	936.00
1895	21	1,092.00
Passenger sleighs with leather or upholstery.		
United States	13	....
England	3	....
France	16	....
German Empire	37	....
Italy	18	....
Roumania	1	....
Russia	3	....
Switzerland	5	....
Other countries	10	....
1899	106	40,086.00
1898	47	17,776.00
1897	61	23,058.00
1896	50	18,900.00
1895	52	19,656.00

EXPORTS.

Whither exported.	Number.	Value.
Heavy vans.		
Africa	5	....
Belgium	21	....
Egypt	16	....
German Empire	45	....
Italy	39	....
Levant	17	....
Roumania	82	....
Russia	3	....
Servia	16	....
Switzerland	1	....
1899	245	$24,552.00
1898	361	22,060.80
1897	260	22,881.60
1896	214	13,996.80
1895	597	28,584.00
Heavy sleighs.		
German Empire	10	....
Italy	1	....
1899	11	216.00
1898	5	72.00
1897	15	201.60
1896	13	311.20
1895	17	288.00
Passenger vehicles without leather or upholstery.		
German Empire	269	....
Italy	6	....
Roumania	6	....
Russia	5	....
Servia	17	....
Switzerland	8	....
Other countries	20	....
1899	326	42,380.00
1898	410	55,300.00
1897	405	56,700.00
1896	350	56,000.00
1895	368	63,840.00

Imports and exports of vehicles—Continued.

EXPORTS—Continued.

Whither exported.	Number.	Value.
Passenger sleighs without leather or upholstery.		
German Empire	31	
Switzerland	1	
1899	32	$1,792.00
1898	30	1,680.00
1897	82	4,592.00
1896	37	2,072.00
1895	75	4,200.00
Passenger vehicles with leather or upholstery.		
Belgium	2	
Bulgaria	12	
England	5	
France	5	
German Empire	116	
Greece	4	
Holland	4	
Italy	16	
Roumania	25	
Russia	95	
Servia	37	
Spain	1	
Switzerland	28	
Turkey	12	
Other countries	15	
1899	377	79,170.00
1898	298	62,580.00
1897	259	62,160.00
1896	307	73,680.00
1895	369	88,560.00
Passenger sleighs with leather or upholstery.		
German Empire	12	
Roumania	1	
Russia	2	
Switzerland	5	
1899	20	1,920.00
1898	15	3,150.00
1897	22	2,880.00
1896	14	8,640.00
1895	10	960.00

CARL BAILEY HURST,
Consul-General.

VIENNA, *May 25, 1900.*

HUNGARY.

VEHICLE MANUFACTURERS.

The leading manufacturers of vehicles in Hungary are Kölber Brothers, Joseph Bogdan, Charles Zsigmondy's successors, J. Bihari & Bro., Michael Nusura, Budapest; Stephen Reitter, Vácz; A. Marschall, John Hruska, Pozsony; Henry Riesz, Debreczen; B. Hegedüs, Nuskolcz.

PRESENT CONDITION OF INDUSTRY.

There are no comparative statistics of the vehicle industry in Hungary for 1800, 1850, and 1900. The census of 1890, however, showed the following conditions:

Of 1,215 individuals engaged in vehicle manufacture, 221 were employers and 950 were employees. Of the 221 employers, 7 were engaged on a large scale, each employing more than 20 employees, and all together 374 men.

AUTOMOBILES IN HUNGARY.

So far as I know there are no manufacturers of automobiles in Hungary, but there is no doubt that Budapest is bound to import a larger quantity from year to year, and representatives of American firms should endeavor to land their machines directly on the market, exporting from New York via the New York and Mediterranean Steamship Company to the port of Fiume instead of via North German ports. In this line, as well as in other machine trades, no local agents can be pronounced reliable, and direct representation by an American employee who speaks German has always proved the most successful. Local dealers are either Germans or Jews. The former seek only to get the good points of the American articles and then reproduce them in their own way; the latter are not always financially sound and only work for high commission.

FRANK DYER CHESTER, *Consul.*

BUDAPEST, *April 10, 1900.*

CARRIAGE AND WAGON WHEELS IN AUSTRIA-HUNGARY.[1]

I have the honor to report, in compliance with the Department's inquiry as to the quantity and value of carriage and wagon wheels and the material therefor imported into Austria-Hungary, that there have been in the last two or three years inconsiderable shipments from the United States of hickory carriage wheels. This importation was due to a fashion which sprang up, to all appearances, spontaneously, and which has now practically gone out of vogue. At present the wheels for trotting sulkies are the only species which can boast of a regular import from the United States, and they come by way of Germany; it is therefore impossible to ascertain the correct figures as to the extent of the trade.

The following kinds of woods are used in Austria-Hungary for the manufacture of wheels: Ash for spokes and fellies, elm and ash for hubs, and beech for fellies of ordinary vehicles.

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[1] Republished from Consular Reports for May, 1898, No. 212.

Carriage wheels can not be suggested as an article for import into Austria-Hungary, because this Monarchy has an extensive supply of the woods needed for their manufacture.

Machinery used in the production of carriage and wagon wheels, if not made in Austria, is imported from Germany, and is much cheaper than ours; but, above all, the low wages make the home product cheaper at the present time than any foreign manufacture.

The wagons and vans in this country are of such different types, and their various shapes are so dear to their respective owners—either being the product of their own inventive genius or having their origin in many local and provincial customs—that they can only be built "on the spot" and at varying prices.

CARL BAILEY HURST,
Consul-General.

VIENNA, *December 4, 1897.*

BELGIUM.

VEHICLE INDUSTRY.

For a long time the manufacture of vehicles of every sort has enjoyed in this country a remarkable vitality and flourishing conditions of trade. Like every other industry, of course it has had its ups and downs and although at the present time it is considered to be in a very prosperous condition, still foreign competition has already begun to make considerable impression even in quarters where in the past the native industry commanded the market entirely. That it is true that foreign competition has already made rapid advances is shown by the fact that in the year 1898, pleasure carriages were imported into Belgium of a value amounting to $192,537, whereas the exportations of carriages of the same description amounted to only $196,912.

The Belgian carriage manufacturers have always been well satisfied with the success of their interests in the past, particularly with the impressions made upon foreign markets.

In 1804, on passing through Brussels, Napoleon I ordered at one time twelve loop-hung coaches, showing that even then this city enjoyed a great reputation for this style of vehicle; and that this reputation has not suffered to any extent in latter years is shown by the success obtained by her builders in the way of premiums awarded at the different world's exhibitions.

The points that are especially found worthy of commendation in the construction of the Belgian carriages are the elegance of form united to solidity of construction, due in a large measure to the fine quality of the material used as well as to the skill with which the same is handled by the workmen employed.

The statistics asked for as to the condition of the industry in 1800 and 1850 have been found impossible to obtain. There are no official publications to my knowledge from which such information can be gleaned. In the first place Belgium, as a separate Kingdom, did not exist prior to 1830 and all efforts made by me to find anything in the way of a publication treating upon the industry mentioned as it existed fifty years ago have proved fruitless.

KINDS OF VEHICLES MANUFACTURED.

As to the styles of carriages manufactured, I would state that the leading ones are breaks, cabs, cabriolets, coupes, landaus, victorias, broughams, wagonettes, tillburys, traps, dog carts, and phaetons.

CAPITAL INVESTED.

In regard to the capital represented I would say that this industry, as is the case with many others of like nature, is as a rule perpetuated in the same family, and few associations and companies of recent origin exist. For this reason, if for no other, it is difficult to obtain any information as to the amount of capital invested, as would be the case were joint stock companies or incorporations engaged, the statistics regarding which would be published in official form.

Here allow me to state that no commercial agencies of any importance exist in this country which publish books of reference concerning capital invested in business, ratings of business men, etc. There is only one agency in Belgium of any standing whatever which acts as a correspondent of Bradstreet & Co., and pretends to furnish something like the information obtainable in our country from such sources. People here would resent the asking of the questions pertaining to their private affairs which are propounded to our business men for the sake of obtaining commercial rating. For the same reason, manufacturers or merchants here refuse to disclose to any questioner the amount of their capital invested, earnings on same, wages paid employees, etc. From the foregoing it will be seen how difficult it is to furnish a satisfactory reply to the fourth question propounded, as to the capacity and earnings of employees.

LABOR AND WAGES.

That the capacity of a great part of the workmen must be good is shown from the character of the work turned out, and the reputation of the same enjoyed not only at home but abroad.

Naturally workmen are paid according to their capacity in this as in every other industry, and the conditions in that respect are no different in this country from those in our own. Taking the whole range of the industry into consideration, blacksmiths and wheelwrights earn on the average from 7 to 8 cents; wood workers on bodies, from 8 to 15 cents; painters and trimmers, from $14\frac{1}{2}$ to $19\frac{3}{10}$ cents; and workmen on carts and wagons, 8 to 12 cents per hour.

MANUFACTURERS.

The following list gives the names and addresses of the leading manufacturers of the Kingdom:

Coach makers.—G. Vandenplas, Rue Van Brée, Felix Verwilt, Rue Quellin, Antwerp; L. Claeys, Rue St. Jacques, J. Dobbelaere, Rue Tonneliers, Bruges; H. De Bruyne fils, Rue du Dannier, De Ruytter-Demessine, Bd. de la Senne, D'Ieteren fréres, Ch. Charleroi, A. Laureys fils, Rue De Joncker, Joseph Mettervie, Rue de France, P. J. Schürmann, Rue d'Orleans, Snutsel et fils, Rue de l'Activité, V. et J. Snutsel fils, Bd. de Waterloo, A. Van Roosbroeck, Rue Willems, Brussels; J. Delbeke, Courtrai; Ch. De Pann, Rue Charles Quint, C. Deruyter, Rue de Poire, Ghent; Gamette, Lambt. le Beque, L. Lilien, Rue Variy, H. Vogt, Rue G. Orbay, Liege; L. Antonis, Verwilt, fréres, Lierre; G. Malcorps, Rue Neuve, Louvain; L. Mucy, Rue des Juifs, Mons; J. Michotte-Carlier, Bd. Canchy, Noel, vve., Rue de Collége, Wilmet-Melchior fils, Rue de Bruxelles, Namur; F. Piron, Spa; Barbier fréres, Sivevezeele; Dedonder, Termonde; H. Boosmeier, Verviers.

Carts and drays.—J. B. Coeckx, Rue Comtesse de Flandre, E. P. de Ridder, Quai aux Brigues, J. Goes, Chausée d'Anvers, E. Hannouille fils, Chausée de Mons, J. Plas, Rue de la Banque, J. B. Van Gend, Rue Van Helmont, Brussels; Société anonyme de Construction de Morlanwelz, Morlanwelz, Hainaut; Mathieu, Thiun, Hainaut.

The express wagons and such as are used at home by butchers and grocery men, milk dealers, and bakers, etc., are not in general use here. Delivery of merchandise of the character above mentioned is ordinarily made by the use of push carts and with small wagons often drawn by the assistance of dogs.

Wagons for heavy drayage are all built very low, long, and extremely heavy. Both running gear and body are constructed very much heavier than we are accustomed to, although the tendency is toward a lighter form of building.

The following is a list of the best-known cartwrights in the country:

J. Delhaye, Willen (Namur); A. Beaufils, Assenois (Luxemburg); A. et D. Faynard, Ath (Hainaut); J. Devos, Marché Vendredi, Bruges; J. B. Buys-Berard, Rue Linnée, J. B. Cockx, Rue Comtesse de Flandrés, Brussels; A. Beternier, Chapelles a Witinnes, J. B. Omez, Courelles, Province of Hainaut; J. B. Morel, Dinant, Namur; E. Ranson, Dixmude, C. Dieroix, J. Schorre, Dottigines, West Flanders; J. et J. Geoffin, Eeckeren, Antwerp; J. Compain, Dassy, Erguelmnes, Hainaut; J. J. Garrand, Etalle, Luxemburg; L. et J. Lefebvre, Falmagne, Namur; E. Depann, Rue St. Georges, Ghent; F. Colson, Jupille, Liege; A. et F. Van Guyenbroeck, Lokeren, East Flanders; Brisoy-Barntry, Morlannelz, J. Nevez, Paturayes, H. Mayeyr, Quevancanyes, A. Mandoux, Rance, Hainaut; Sabbe Maschis, Roulers, West Flanders;

Monsen, Roux, Hainaut; C. Bricont, St. Aubon, Namur; A. Gilmot, St. Vaast, Hainaut; J. Mathot, Saiveniere, Namur; J. Dodemont, G. Bayob, W. Bayob, Vise, Liege.

AUTOMOBILES.

Here, as is the case pretty much everywhere, the automobile has already been introduced and is rapidly becoming popular, although its comparatively high cost renders it at present rather an object of luxury than of general use.

It is estimated that in Brussels alone there are owned about 300 machines of different makes, and already one or two large retail establishments have auto delivery wagons running. Already there are quite a number of establishments engaged in the manufacture of this style of vehicle and there seems to be a growing tendency to found new ones, which tends to show that a demand is expected.

The prices of course vary very greatly, depending upon the style of carriage as well as the character of the motor employed.

The largest manufacturing establishment in this country engaged in this branch of industry, according to the best information obtainable, is the Fabrique Nationale d'Armes de Guerre, at Herstal, near Liege, which has successively added to the object for which the company was formed (the manufacture of firearms), that of bicycles and lately that of automobiles. It is stated that this firm alone on the 1st of April had orders for the building of 100 carriages of different sorts.

Following will be found a list of the more prominent automobile manufacturers throughout the country.

Ch. Belot, Rue du Poinçean, 24; J. A. Boisselot, Rue de Fiennes, 66; Electricité Mecanique, Automobiles, Digne du Canal de Charleroi, 4; Fabrique Nationale d'armes de Guerre, de Herstal, Rue de l'Ecuyer, 31; Dechamps, Rue Frére Orban, 31; Ad. Larand, Rue aux Champs, 21; La Compagnie Belge de Construction d'Automobiles, Place Louise, 4; La Societé Général Belge des Automobiles, Rue d'Arlon, 58; Vivinue & Cie., Rue du Progrés, 244; Walleghem & Sovghen, Rue de la Concorde, Brussels; La Compagnie Belge des Automobiles (Sociéte Anonyme) Rue Vander Kelen, Antwerp; Les Etablissements Pieper (Sociéte Anonyme), Liege; La Sociéte Anonyme de Construction Liégeoise, d'Automobiles, Rue Lairesse, Liege; N. Vincke, Rue Leopold. Malines; La Sociéte Anonyme des Usines Delin, Louvain; La Sociéte Anonyme des Ateliers Germain, Monceau-sur-Sambre L. Liuon, Ensival.

GEO. F. LINCOLN,
Consul-General.

ANTWERP, *April 19, 1900.*

DENMARK.

VEHICLE INDUSTRY.

The carriage industry proper is of small consequence, and Copenhagen is its center. The number of pleasure vehicles of all descriptions turned out annually does not exceed 300. They are of all the usual styles, except buggies, and are built to "cut under" on account of the narrowness of the Copenhagen streets.

The condition of the vehicle industry of Denmark at the present time presents no very striking contrast with its condition either fifty or one hundred years ago. The bicycle has come into general use, of course, and the automobile is not absolutely unknown, but the latter will have to become as good and nearly as cheap relatively as the bicycle before it attains much popularity. Horses will, of course, pass to their rest and even Danish wagons will wear out, and in this lies the hope of the manufacturer of good and cheap self-propelling vehicles. But the dawn of that day has not as yet appeared.

The historical aspect of this question is hardly worth going into, with the possible exception of the Copenhagen cab.

In the olden time, communication between the towns was by stagecoach or by boat; the saddle horse was also used.

MANUFACTURERS.

In Copenhagen the principal makers of carriages are F. C. Shultz, 40 Nörregade, who enjoys the title of carriage maker to the Danish court; F. L. Gloy, 61 Nörrefarimagsgade; L. Andersen, 13 Studiestraede, and V. Torbensen, 48 Gothersgade.

The N. Larsens Vognfabrik, Limited, with a capital of 4,000,000 kroner ($1,072,000), is a concern which makes not only carriages, but tram cars, omnibuses, etc., and this company has been experimenting with compressed air as a motive power, but so far without gratifying results.

All carriage builders make wagons and hand carts, but figures concerning them are unavailable.

WAGES.

The average daily wage paid is $1.34. The number of employees is by no means constant, but varies with the season and the orders on hand. Statistics for the whole of Denmark are not to be obtained.

CLASS OF VEHICLES MANUFACTURED.

The wagons are virtually all alike—somewhat in the style of a regular Studebaker or Jackson wagon—but the sides flare a little. They are heavy and strong, never covered, and require two horses. One-horse wagons are almost unknown. And just here is where the hand carts come in, and their name is legion. They are used for any purpose that does not require 2 horsepower. A man in harness is cheaper than horse and driver, and a boy is cheaper than a man, and thus it happens that most of the hand carts in this city are pulled by youths or boys.

J. C. INGERSOLL, *Consul.*

COPENHAGEN, *May 22, 1900.*

CARRIAGE AND WAGON WHEELS IN DENMARK.[1]

The Danish statistics, with few exceptions, include the imports of all articles made of wood under the general term "manufactures of wood." Figures, therefore, dealing with the imports of wheels and material therefor can only be approximated by men familiar with the trade.

No ready-made wheels are imported into Denmark. For work wagons, trucks, drays, and heavy vehicles, the material used for wheels is oak, supplied principally by Denmark itself, the balance coming from Sweden. Such wheels must, according to law, measure at least 4 inches across the tire; this rule applies both to country and city.

For carriages, buggies, road carts, and light vehicles, the wheels are made of American hickory, obtained exclusively from importing houses in Hamburg. It is safe to say that the wheels of all the cabs in this city are made of hickory.

I have consulted Mr. Larsen, of the firm of N. Larsen & Co., No. 11 Smallegade, the largest manufacturers of wagons and carriages in the Kingdom. He estimates that there is imported annually 20,000 hickory spokes and 500 rims (fellies). The manufacture is only for domestic consumption, and Mr. Larsen thinks the supply about equals the demand. This firm itself consumes about one-half of the annual import of hickory. He is also of opinion that during the present year (1897) there have been imported about 3,500 rough hubs. The orders for this market being so small, dealers find it more convenient to buy from Hamburg, especially as the American exporter is averse to making such small shipments. The population of the Kingdom is about 2,200,000, and, although the quantity of material imported may seem insignificant from an American standpoint, if it meets the demand, as Mr. Larsen says—and he is a competent judge—it is difficult to see how it can be increased, unless an export trade in wheelwright supplies is developed, and there does not appear to be any prospect of this.

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[1] Republished from Consular Reports for May, 1898, No. 212.

I have also been in consultation with Messrs. Sally Meyer & Co., No. 11 Laderstrade, dealers in carriage and wagon supplies, and quote their letter to me in full as follows, in translation:

> In reply to your letter, we must remark that ready-made wheels are not imported into Denmark. Although the duty on ready-made wheels is 6¼ öre (1.7 cents) per Danish pound (1.102 American), we do not doubt that the Danish carriage builders would find it to their advantage to import them from America; but our manufacturers are, in this respect, very conservative, and for a middleman it would be very difficult and risky to carry a stock which must necessarily consist of many sizes. If a capable firm would send a sample or consignment lot here, it would undoubtedly lead to business. When the wheels have been introduced and found to be good, they could be imported for our own account. This applies, however, only to wheels for light vehicles. Wheels for working trucks can not, in our opinion, be imported. The duty on such heavy articles amounts to too much, and our forests furnish so much ash and oak, of which the wheels are made, that foreign competition is excluded.
>
> On the other hand, we import via Hamburg a good deal of American hickory rims and spokes. We have many times tried this import from the United States direct, but always with unsatisfactory results. We have always ordered the very best goods, and they have always sent us goods very much inferior to those (American goods) we buy from Hamburg merchants. The reason probably is that Hamburg imports more in a week than the whole of Denmark would import in a year; but the principal reason why we can buy the rims cheaper through Hamburg may be found in the fact that Hamburg imports the wood in its natural form and works it into rims, while we must import the rims already shaped, in which condition they take up more space, and freight is higher. These rims are used exclusively for light-draft vehicles, and we believe the yearly import amounts to about 300 four-wheel sets. The duty on these is only 31 öre (8.3 cents) per 100 pounds Danish.

It would seem from the foregoing that there is no market here at the present time for heavy wheels from the United States, that we already control the market, through Hamburg, in wheel material for light-draft vehicles, and that there is an opening for the ready-made wheels for the latter. These could be stored in the "free port" duty free and exhibited in the city through samples, or a trial shipment could be consigned direct to a dealer in Copenhagen, at the risk and account of the American exporter. The Danish merchant wants the privilege of seeing and handling the goods before investing his money, and, in my opinion, this is the only way in which American-made wheels can be introduced. The three principal dealers in Copenhagen are: H. E. Bonner, Vestergade 28; Sally Meyer & Co., Laderstrade 11; Nienstadt & Co., Vester Boulevard 20.

ROBERT J. KIRK, *Consul.*

COPENHAGEN, *September 18, 1897.*

FRANCE.

Vehicles for the district of Paris are principally made in the Department of the Seine. The manufacture of vehicles is to be divided into two principal groups: First, private carriages; second, vehicles for commerce and agriculture.

PRIVATE CARRIAGES.

There are only about ten manufacturers of private carriages of any importance in this district, and I quote the firms in order of their importance: Binder (first grand prize at Paris Exposition of 1899), 170 Boulevard Haussmann; Henry Binder, 31 Rue du Colisée; Mulbacher, 63 Avenue des Champs Elysées; Bail junior, 67 Avenue Malakoff; Ehrler, 51 Rue de Ponthieu; Kellner, 125 Avenue Malakoff; Labourdette, 183 Rue de la Pompe; Million, Guiet & Co., 124 bis, Avenue de Villiers; Grummer & Co., 26 Rue Cambacères; Bail Ainé, 98 Avenue Kléber; Carrosserie Industrielle, 228 Faubourg St. Martin.

There are no statistics giving the number of carriages manufactured per annum.

The styles manufactured are very numerous. Makers manufacture the following types: Coupé, two seats, very light; coupé, three-fourths circular front; coupé, three-fourths square front; "Duc" (a kind of Victoria with seat behind for footman). There are several designs of this carriage. The "Duc" cab with straight seat is the latest style. "Mylord" (Victoria), dogcarts, landeau, buggies, morning cart, cab cart, rally cart, Derby cart, etc. The inclosed charts of the Carrosserie Industrielle will show the various styles in general use.

The capital represented by the above-mentioned firms is estimated at $20,000,000, but there is no way to ascertain the exact amount.

The number of employees is given between 2,000 and 3,000, but it varies according to the season. The wages paid are from 7 francs ($1.35) to 14 francs ($2.70) per day of ten hours' work. There are a few smaller manufacturers with capital aggregating about $5,000,000, employing perhaps 1,000 employees, paid as above.

It is considered that the private-carriage industry has increased but very slightly since 1850. The reason given is that under the empire the court caused an influx of "fashionable" people who kept carriages. In 1800 the manufacture of fine carriages was limited to a certain heavy type called "Carrosse."

COMMERCIAL VEHICLES.

The most important houses are, in order of importance, as follows: Carrosserie Industrielle, 228 Faubourg St. Martin; Marcou, 73 Rue Riquet; René Breteau, 162 Rue Championnet; Larochette, 120 Avenue Daumesnil.

The capital represented by these firms is about $3,000,000. They employ about 2,000 hands, which are paid: Blacksmith, from 8 francs ($1.54) to 12 francs ($2.31) per day; wheelwright, from 7 francs ($1.35) to 8 francs ($1.54) per day; riveters and carpenters from 7 francs ($1.35) to 8 francs ($1.54) per day; painters from 6 francs ($1.15) to 10 francs ($1.93); upholsterers from 7 francs ($1.35) to 8 francs ($1.54).

This industry has increased enormously since 1850. It is about three times more important to-day than it was fifty years ago.

AUTOMOBILES.

This branch of the industry is increasing enormously. It is estimated that 30,000 are in circulation at the present time in the Paris consular district.

Electrical automobiles would be preferred, but for the difficulty of recharging the accumulators outside of Paris. If depots for the purpose of recharging or exchanging the accumulators were established every 20 or 30 miles, the sales of electrical automobiles would be very much larger.

The most popular are petroleum automobiles because fuel can be obtained everywhere. The "Voiturettes," a very light automobile with two or four seats, sold at from $400 to $1,000, are at present most in use.

The following are the principal firms doing business in automobiles, together with the estimated capital: Belvallette frères, 24 Avenue des Champs Elysées; works at 64 Rue Pergolèse; $200,000; employees, 400. A. Clement, Levallois-Perret, Seine; $4,000,000; employees, 2,500. Delahaye & Cie., 10 Rue du Banquier; works at Tours; $600,000; employees, about 700. Dion, Bouton & Co., 46 Avenue de la Grande Armée; works at Puteaux, Seine; $5,000,000; employees, 2,000. Ernst & Cie., 241 Boulevard Périère; $300,000; employees, 400. Hurtu, 10 Rue Hélevy; works at 54 Rue St. Maur; $400,000. Liberator, Pantin, Seine; $200,000; employees, 250. La Minerve, 30 Rue du Point du Jour, Billancourt, Seine; Soc. Anonyme d'Electricité et Automobiles, 48 Rue du Théâtre; $2,000,000; employees, 1,200. Panhard & Levassor, 19 Avenue d'Ivry; $4,000,000; employees, 2,000. Georges Richard, 23 Avenue de la Grande Armée; $600,000; employees, 700. Peugeot, 83 Boulevard Gouvion St. Cyr; $3,000,000; employees, 2,000.

The salaries are as follows: Fitter, 7 francs ($1.35) per day of ten hours; mechanic, 10 francs ($1.93) per day of ten hours; turner (lathe), 12 francs ($2.31).

It may be said that most of these firms not only manufacture automobiles, but also bicycles, as in the case of Peugeot, Hurtu, Georges Richard, etc.; motors, as Dion, Bouton, etc., Panhard & Levassor.

JOHN K. GOWDY, *Consul-General.*

PARIS, *August 3, 1900.*

GERMANY.[1]

VEHICLE INDUSTRY.

The wagon and carriage manufacture is one of the oldest and most widely extended of German industries. There are in this country 1,020 manufacturers of vehicles sufficiently important to be included in the Industrial Directory of the Empire. Many of these are firms or companies of large facilities, which manufacture vehicles for both home and export trade. There are in Berlin three illustrated periodicals devoted solely to the wheelwright's handicraft and trade. There are in and about Berlin seventy makers of wagons and carriages of various classes, including everything from a royal barouche or landau to a handcart or dog wagon. Of these, the most notable builders of fine carriages for public and private use are: The Ruhlstein Carriage Company, Ernst & Co., Hermann Ganschwindt, W. Erdmann, jr., Jos. Neuss, E. Zimmermann, J. Frauenknecht, C. Klient, Wilhelm König, Max Leuschner, August Farber, George Morigen, and W. Steinmetz. Among other notable builders located elsewhere in Germany may be mentioned the following:

Dick & Kirchsten, Offenbach on Main; A. Krüger, Erfurt; Fr. Reutter, H. Wimpf & Son, Stuttgart; Engelmann & Co., Warnsdorf in Baden; Paul Axthelm, Weimar; Gastell Bros., Monbach-Mainz; Georg Wiener, Oels, Silesia; De Dietrich & Cie, Niederbronn, Alsace.

In fact, it may be said that every large town or city in Germany has local makers of carriages and wagons capable of fulfilling all requirements. It will be noticed in the wheelwrights' journals that no advertiser announces finished articles, but all advertise materials and fixtures for the use of carriage and wagon builders. Thus Messrs. Menne & Kasspoht, of Hanover, are large dealers in American carriage timber, especially spokes, hubs, and felloes. The Troy Bending Company, of Troy, Ohio, is ably represented. Several Parisian factories advertise carriage lamps and other fixtures, but axles, joints, and upholstering materials are mainly of German manufacture. Workmen are abundant and skillful, and earn from one-third to one-half the wages that are paid for similar labor in the United States.

AMERICAN VEHICLES HANDICAPPED IN THE GERMAN MARKET.

Since the American vehicle industry was restricted and depressed by the advent of the bicycle several years ago, repeated efforts have been made to establish an export trade in wagons and carriages to

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[1] In addition to the reports from Germany herewith, the consuls at Bavaria, Munich, and Solingen have reported that vehicle industries, outside of those for merely local demands, do not exist in their districts.

Germany, but, so far as can be observed or ascertained, without success, and for the following, among other, reasons:

1. Upholstered vehicles of all kinds are subject to a high duty when imported to this country, whereas materials of every kind used in the wheelwright's trade are either free or bear only a nominal duty. For instance, a common runabout open buggy which costs, crated, at New York $126, must pay 150 marks ($35.70) duty on entry to Germany. Add to this sea freight for space occupied by so bulky an article, and the net cost on arrival is raised quite above the price of similar vehicles of home manufacture. Rubber tires are, for some reason, far cheaper here than in America.

2. The forms and classes of carriages used here differ essentially from those most generally employed in the United States. There the owner of a vehicle of the buggy class generally drives it himself, and when he alights fastens his horse to a ring in the pavement or to a hitching post. Here the hitching post is unknown, and the carriage is, in most cases, driven by a coachman, or, if temporarily driven by the owner, the driver is taken along to take charge of the team when the master lays down the reins. There is no place in the social system of this country for the American buggy or single-seated phaeton, and when the German farmer takes his family for a Sunday drive it is usually with a horse and wagon that have done service for more serious hauling during the week.

3. All kinds of carriages here are far more heavy and substantially built than in the United States. In this the Germans are undoubtedly fogyish and far behind the American standard, but they think they are right, and consider most American buggies and carriages too light to stand heavy use and be permanently durable. For the same reason, axles, spindles, and other parts made here are larger, and will fit nothing that is made in the United States. The first objection the German customer will make to an American-built vehicle is that if it breaks or any part wears out, it can be only with great difficulty repaired in this country. American bolts and screws of nearly all kinds are cut with a thread so different that German-made nuts will not fit, and this fact blocked the introduction of American bicycles until our leading makers supplied their agents here with parts and tools, and even workmen sufficient to set up American repair shops in all principal towns.

3. The number of private carriages used here is small in proportion to the wealth and population of German cities. The bicycle is of almost universal use among the middle and working classes, and, except for the wealthy and exclusive minority, cabs are the mainstay of transportation for everyday life. In cities where a cab is ready at every street corner from morning until after midnight to carry one, two, or three persons 2 miles for 20 or 25 cents, there is small temptation to undertake the costly luxury of a private equipage, especially since

electric tramways, omnibuses, and motor carriages have made the driving of a spirited horse or pair dangerous and unpleasant.

4. If there is one untried opportunity left in Germany for American carriage builders, it would seem to be in the direction of cabs, or "droschken," as they are called here, for public use. These are of several forms—the coupe, with glass front, a seat for two persons, and "strapontin," or adjustable narrow front seat, for a third, which costs here new about $350; the Victoria, with deep front and buggy top, which costs $250 to $300, and the double seated one-horse landau or "caleche," with top that divides in the middle and lowers forward and back. This costs when new $350 to $400. It is possible that these models, constructed by American makers and imported in the rough to be set up, painted, trimmed, and finished by German workmen in this country, might come within the line of profitable competition. But the experiment would be at best doubtful.

AUTOMOBILES.

It was stated in the report of this series describing the International Motor Carriage Exposition held at Berlin in September of last year (Consular Reports, No. 231, December, 1899[1]), that although nearly all hydrocarbon motors, including the Daimler machine and all variations of the Otto gas engine, are substantially German inventions, automobilism and the manufacture of motor vehicles has developed much more slowly in this country than in France, Belgium, or even England. It was not until the exposition of last year was organized that the motor carriage appeared on the streets of Berlin, and even now there are only twenty-four registered for use by private individuals. Besides these, however, there are as many more driven for advertising purposes by agents of motor-carriage makers located here and in other cities. There are twenty electrical omnibuses in service, and more are being built as rapidly as possible, and perhaps a hundred electrical and hydrocarbon motor drays, delivery wagons, and business vehicles of various types.

There were represented at the exposition of 1899 thirty-two makers of motor vehicles in Germany, nearly all of whom, except the Daimler Company, at Cannstadt, and the Benz Motor Wagon Company, of Mannheim, had been previously manufacturers of bicycles, wagons and carriages, or electrical machinery. All of these makers, so far as can be ascertained, are actively occupied, with their output usually sold in advance of completion, so that it is still difficult to obtain a motor vehicle of native manufacture without waiting for it to be completed. This is especially true of omnibuses and wagons of various types for business purposes, which seem to have been adopted in this country more readily than carriages for travel, pleasure riding, or racing purposes. There will be no important automobile races in Germany this year, for the reason that the best makers and drivers are occupied with the exhibition and contests pertaining to the International Exposition at Paris.

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[1] Also in Advance Sheets, No. 561, October 24.

Of American motor carriages, there are in use at Berlin several of the Columbia type from Hartford, Conn., which are used as models under a business arrangement between the Pope Manufacturing Company and the Motorfahrzeug Fabrik at Marienfelde, near Berlin. These are electrical carriages, and, although expensive, they are greatly admired for their fine workmanship, elegance of form and finish, and their smooth, noiseless action. Besides these, there is an agency at No. 74 Unter den Linden for an American steam carriage, which is sold in the United States for $650, but for which 5,000 marks ($1,190) is asked in Berlin, a price that is here considered excessive.

PERMANENT AUTOMOBILE EXHIBITION.

But the fact of most importance to American manufacturers is that there has been organized here and will be opened in June a permanent exhibition of automobiles, which will offer exceptional facilities for the motor-vehicle builders of all countries to bring their products before the people of Germany under highly advantageous conditions and at minimum expense.

The association includes among its founders several prominent capitalists and business men of Berlin, its officers are men of the highest character and social position, and its purpose is not to make money, but to provide a permanent, legitimate basis of encouragement to the motor-vehicle industry in Germany, and to automobilism as an adjunct of sport, business, and recreation. The managers of this enterprise realize fully that German manufacturers are as yet in some important respects behind those of France and the United States; they appreciate the advantages that will result from bringing the leading motor vehicles of all countries into practical, side-by-side competition, and they therefore offer to foreigners and their machines precisely the same privileges and conditions that are vouchsafed to those of their own country.

The association is a limited stock company, entitled "Die Automobil Ausstellung," with offices at No. 6 Dorotheen Strasse, and exhibition grounds and driving school on Georgen Strasse, Berlin. The space for permanent exhibits includes 1,200 square meters (12,902 square feet), with offices, restaurant, and all the features of a well-arranged exposition. Floor space will be rented to exhibitors at a uniform half-yearly rate of 200 marks ($47.60) per square meter, with 60 marks ($14.28) per meter for wall space to be used for advertising purposes. This will be the only expense involved, no commission or other charge being made for vehicles sold when on exhibition or from samples there displayed. The space rates above stated will be reduced proportionately when the term exceeds six months. Vehicles and other articles on exhibition will be guarded by agents of the company, which will, when requested, effect fire insurance on exhibits at the expense of the owner.

It should be understood that the association is not commercial, and can not accept the business of selling, on commission or otherwise, the motor carriages or materials exhibited by any manufacturer, native or alien, but it will, when requested, recommend to foreign makers firms or individuals of good standing as agents in Germany, and its recommendation in this respect will be a high testimonial to the character and responsibility of the party recommended.

An illustrated catalogue of all exhibits will be issued and corrected from time to time so as to include new articles received for display. The public will be admitted gratis to all parts of the exhibition, which will thus become a permanent, open, international business display of motor vehicles and parts and materials pertaining thereto, classified as follows: (*a*) Motor cars of every description for conveying passengers. (*b*) Motor vehicles for the transport of goods. (*c*) Motor cycles and tenders for use with the same. (*d*) Accessories for motor-driven vehicles, fittings, tools, etc. (*e*) Books on the subject, drawings, models, etc. (*f*) Articles connected with the manufacturing, etc., of motor cars, etc.

That this permanent exhibition will meet an obvious want and exert an important influence in the development of automobilism in Germany is beyond any reasonable doubt. There are to-day in Berlin and its outlying suburbs scores of persons—physicians, lawyers, and other professional and business men—who are ready and anxious to purchase an automobile, but not being mechanics or thoroughly informed on the subject, they distrust their own judgment and hesitate to buy lest they may find with experience that they have chosen unwisely and paid a high price for an inferior machine.

The permanent exhibition will give intending purchasers an opportunity to examine and compare side by side motor vehicles of all classes and nationalities, propelled by steam, hydrocarbon, and electrical motors, to see them tested in competition with each other, and when a machine is chosen the buyer will be taught by an expert to understand and manage it. Numerous applications for space have already been received from French and Belgian makers, so that the exhibition will assume from the first an international character.

DUTY ON AUTOMOBILES.

For the information of American manufacturers who may wish to avail themselves of this opportunity, it may be stated that thus far motor vehicles are classified under the German tariff law as machinery and bear an import duty of 10 marks ($2.38) per 100 kilograms, or $23.80 per metric ton of 2,204 pounds.[1] This rate is likely to remain unchanged until the new German tariff now under discussion shall take effect in January, 1903, at which time it is probable that the duty on most manufactured articles will be raised more or less above the present rates.

It is highly desirable that the publishers of all American periodicals devoted to automobilism should, in the interest of their advertisers and the general cause, send their publications regularly to the reading rooms which will form an attractive feature of this exposition. Automobilism in Germany is in much the same stage of development as the manufacture and use of bicycles in 1894–95. The American bicycle came and not only set new and higher standards of construction, finish, and general excellence, but secured a place in the German market which it holds to-day. Will our makers of motor carriages, who have entered upon the new industry with such valiant spirit, be eqally enterprising and achieve an equally creditable and profitable result?

FRANK H. MASON,
Consul-General.

BERLIN, *April 30, 1900.*

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[1] According to the German tariff, the following duties are charged on machines and carriages entering the Empire, per 220.46 pounds:

Machines:	
1. Locomotives and portable engines	$1.904
2. Other machines, according to the preponderating material:	
α. Of wood	.714
β. Of cast iron	.714
γ. Of wrought iron	1.19
δ. Of other common metals	1.904
Tare to No. 15 *b* 2 δ: B. and C. 13; Bs. 6; Bl. 4.	
Note to *b* 1 and 2: Marine engines and boilers	Free.
Note to *b* 2 β and γ (applicable to treaty countries): Machinery for flour mills, electric machinery, cotton-spinning machinery, weaving machinery, steam engines, steam boilers, machinery for the manufacture of wood and paper pulp, machine tools, turbines, gearing, machines for working wool, pumps, ventilators, blowing machines, sets of rollers, steam hammers, shears and punches, cranes, hoisting machinery. When any of the above-mentioned machines, chiefly composed of cast or wrought iron, are imported in detached parts from a treaty country, all the detached parts being cleared at the same time, such parts shall be dutiable according to the preponderating material of the complete machine.	
Carriages and sleighs:	
1. Railway carriages—	
α. Neither upholstered nor with leather work.....ad valorem..	6 p. c.
β. Other....do....	10 p. c.
2. Other carriages and sleighs, upholstered or lined with leather..each..	35.70

AIX LA CHAPELLE.

There are no manufactories of any importance in this city; the largest, which has a reputation for fine carriages, employs less than twenty men. This city has a number of carriage and wagon shops, each containing three to five mechanics. The prices charged, upon order, average 2,000 marks ($476) for landaus, cabriolets, barouches, and very finest four wheel, leather top, upholstered in best cloth. In fact, I am surprised at the low cost of vehicles. Shops work on orders.

Historically, I feel quite safe in saying that the four-wheeled landau and the two-wheeled cart, for draying purposes, have been the regulation vehicles for the last hundred years. The character of this city seems to call for just such vehicles. They are very heavy; the carts weigh from 1 to 1½ tons and one horse pulls from 2 to 3 tons.

Automobiles are getting to be very plentiful on the streets; they are manufactured in Germany and France. This city has now in corporation two or three automobile manufactories, but at present there is but one in operation, Cudell & Co., who placed over $100,000 worth of American machinery in action about two years ago. They only make what is called a tricycle, a French patent. The company is now undergoing some sort of a transformation, and hence brief mention is sufficient at present.

FRANK M. BRUNDAGE, *Consul.*

AIX LA CHAPELLE, *March 22, 1900.*

COBURG.

There is only one factory of vehicles of any importance in this consular district, that of Mr. N. Trutz, Coburg.

Mr. Trutz is a thorough expert at his trade. He had for a number of years a factory at Paris. On being expelled from France in 1870, at the outbreak of the Franco-Prussian war, he established himself at Coburg, bringing a few of his best workmen with him from France. He started business on a small scale, having only about 10 assistants. His business has become of considerable importance during the last thirty years, he employing now from 50 to 60 skillful hands, of which the best are receiving wages of from 150 to 200 marks ($35.70 to $47.60) a month.

He manufactures vehicles of all styles used in Germany and usually keeps a pretty large stock on hand, including landaus, chaises, omnibuses, and sporting wagons and wagonettes of every sort and description. In the spring and autumn, at the change of seasons, his stock is often completely exhausted. His goods are well known as being first-class; very durable and of elegant style and finish.

The yearly output amounts to about 300 vehicles, ranging in price from 1,000 to 3,000 marks ($238 to $714).

There are no automobile cars either running or manufactured in this district, and on account of the country being very hilly and the roads in a rather bad state it is very unlikely that the automobile will ever become of importance here.

OLIVER J. D. HUGHES, *Consul.*

COBURG, *March 19, 1900.*

DRESDEN.

VEHICLE INDUSTRY.

There are but two manufacturers of carriages within the limits of this consular district that are of any importance, and but two that have facilities for completing a vehicle, the rest being small jobbing concerns, each making a specialty of the woodwork, the ironwork, the upholstering, or the painting of wagons and carriages.

The concerns referred to keep a limited stock on hand—say, 10 to 12 carriages—not exceeding in value 40,000 to 60,000 marks ($9,520 to $14,280), and for their trade depend mainly on orders.

The two leading manufacturers are Dresdner Luxuswagen-Fabrik Robert Lieber, Dresden N., Königsbrücker-Strasse 56, and Heinrich Gläser, Dresden A., Rampische Strasse 6, who practically supply the demand, the latter being the concern patronized by the Royal Saxon Court. These two firms have a capital scarcely exceeding $100,000 each and have good reputations for doing excellent work.

A 2-horse landauer, upholstered and painted in good style, accommodating 4 people, would cost from 1,800 to 2,800 marks ($424.40 to $662.40), a victoria would cost from 1,200 to 1,400 marks ($285.60 to $333.20), a cab (3 and 4 persons) would cost from 1,000 to 1,100 marks ($238 to $261.80), a buggy ("Americain") would cost 800 marks ($190.40). Rubber tires cost 500 to 600 marks ($119 to $142.80) extra (set for 4 wheels).

WAGES.

Woodworkers are paid from 28 to 38 marks ($6.66 to $9.04) per week, saddlers and upholsterers from 20 to 24 marks ($4.76 to 5.71) per week, blacksmiths about 25 marks ($5.95) per week, painters about 20 to 25 marks ($4.76 to $5.95) per week—twelve hours of labor per day.

The usual time required to complete one carriage is about seven weeks; three carriages can be completed in two months, and six in three months.

The wood used is mainly oak, beech, maple, and hickory.

DRESDEN VEHICLE REGULATIONS.

The city regulations governing the width of tire and the gauge of vehicles, which must be strictly observed by the carriage builders, are as follows:

Carriages and light vehicles of all kinds must have a width of tire of at least 2½ inches. Teams for heavy loads, such as brick, coal, earth, stone, etc., must have a width of tire of at least 4 inches. All vehicles must have a flat and not rounded surface of tire. Wagons or vehicles with nails or other fastening parts protruding from their tires are prohibited.

The greatest pressure of the wheel on the road or street must not exceed 2,500 kilos (about 5,100 pounds) in summer and 3,000 kilos (6,614 pounds) in winter, excepting loads that can not be divided, such as steam boilers, trunks of trees, etc.

The gauge must not exceed 1.38 meters (4.43 feet) and the gauge of the front wheels must be the same as that of the hind wheels. The average gauge of a "landauer" is from 1.34 to 1.38 meters (4.35 to 4.43 feet) and that of a cab 1.25 meters (4 feet).

Very few, if any, American-built carriages are used in Dresden, but I should think vehicles made in accordance with the legal restrictions would meet with favor.

AUTOMOBILES.

The original invention of the automobile or motor vehicle is claimed for Germany by the firm of Carl Benz & Co., Rheinische Gasmotorenfabrik Aktiengesellschaft, in the city of Mannheim.

The first experiments were made by this firm in 1884–85, and in the latter year the first vehicle propelled by a benzine motor was placed on the market, and created a general sensation at the industrial mechanical exposition of 1888 in Munich. The first patent on motor vehicles was granted this firm on January 29, 1886.

The industry has since then made rapid progress, and while a number of other firms have placed vehicles of similar construction on the market, the "Benz" motor carriage has always taken the lead and is preferred to all the other systems.

Up to October 1, 1899, the Benz company built 2,000 motor vehicles, which are in use in many foreign countries, as well as in Germany.

The Benz carriage runs well on all roads, even when frozen or covered with snow, and can attain a speed of 30 kilometers (18.64 miles) per hour on a level. It mounts grades up to 18 per cent, which means on 6 yards of road 1 yard ascent. One supply of benzine will do for 50 to 80 miles of running distance.

Other automobile manufacturers of importance in Germany are: Daimler & Co., in Cannstatt, Wurttemberg Dürkopp & Co.; Cycle

Works, at Bielefeld; Adam Opel, Rüsselsheim am Rhein, and Gudell & Co., Aix-la-Chapelle (motor tricycles).

In this consular district there are practically no manufacturers of automobiles. Two firms have been experimenting for some time with a view of solving the problem of inventing an automobile propelled by electricity, and the Sächsische Akkumulatoren-Werke, Aktiengesellschaft, in Dresden, have just completed a motor wagon for heavy loads, propelled by electricity, with electric steering gear and electric brake; it has many new improvements, the propeller being located over and driving the front wheels. The storage battery is in the bottom of the wagon, and one charge will run it about 60 miles. The electric steering gear is so constructed that it will turn the carriage in a circle on its hind wheels without describing the least radius—an advantage which the inventor claims no other automobile can offer.

The other concern in Dresden that has taken up the automobile is the Gasmotoren-Fabrik Moritz Hille, Dresden-Löbtau. So far, this concern has only been experimenting and has not yet placed a vehicle on the market. It sent a pretty fair exhibit to the German automobile exposition, held in Berlin, in the fall of 1899.

There are only six or seven automobiles of different types, mainly Benz motors, running in Dresden, averaging in price about 4,000 marks ($952) each.

That the automobile is not very popular in this part of Germany (I understand it has gained a better foothold in Berlin) is certainly evident from the small number in use in this city, and I learn from the largest dealer in bicycles, tricycles, etc., that he made every effort—by exhibit, advertising, or otherwise—to bring the automobile to the attention of the people, but without apparent success. He says, and this is also the general opinion, that the automobile has without a doubt a good future, but that there would be little chance for an increase of sales until certain defects have been remedied and an automobile offered which does not continually get out of order—as is more or less the case with vehicles propelled with benzine. He thinks that as soon as a satisfactory automobile propelled by electricity is produced, that can run about 50 miles with one charge, success would be insured.

Motor tricycles are even less in favor than the automobiles, and the only manufacturers who have had a fairly good sale are Messrs. Dion & Bouton, in Paris, whose motor cycles are considered the best yet invented. The motor tricycle will hardly have any practical value and will remain a sporting vehicle, because it does not run smoothly enough and because it can not be used for moving or pulling loads, as it is too weak to mount grades. Gardell & Co., in Aix-la-Chapelle, are considered the best manufacturers of motor tricycles in Germany.

CHAS. L. COLE,
Consul-General.

DRESDEN, *April 11, 1900.*

FRANKFORT-ON-THE-MAIN.

VEHICLE INDUSTRY.

Vehicles are manufactured in the Frankfort consular district by a number of small concerns. Two only, one in the city of Frankfort and one at Offenbach, are of importance.

I have been trying in every way to obtain from these two latter firms the information asked for, but in spite of promises to do so they have not furnished it.

The reason for this unwillingness of German manufacturers and business men to furnish data to United States consuls is due to the fact that leading commercial and other newspapers are continually cautioning German manufacturers against giving information to Americans.

The German Museum of Commerce, a bimonthly journal published at Berlin, in its number of May 1, 1900, contains a long article under the caption of "American consuls," in which they—the consuls—are accused of using every device to injure the German manufacturer; and calls upon the German authorities, as well as upon Germans generally, to be most reticent in their intercourse with American consuls, so that they will not be enabled to injure German national and local interests.

I can not find any indication of American competition in vehicles except in those used by railways. Germany, last year, imported from the United States 152 of these.

Under the heading "Wagons and sleighs," I find that Germany in 1899 imported from Belgium 21; France, 91; Austria-Hungary, 85; no other countries mentioned.

The different commercial reports for the year 1899 speak of the business of manufacturing vehicles as having been good, owing to the general revival of business and prosperity, so that every branch of the industry was fully employed. For vehicles de luxe, especially, the demand was strong. It is also stated that foreign orders which formerly went to France were filled in Germany, and that it is the endeavor of German manufacturers to equal those of France with reference to tasty workmanship. Vehicles for transportation have been exported to the German colonies in Africa as well as to Russia, Holland, and Switzerland.

As the import duty on finished wagons and sleighs, irrespective of value, is $35.70 each, it would not be an easy task, in my opinion, to successfully compete with at least the cheaper grades of ordinary vehicles in this market. The prices at which carriages, such as landaus, barouches, etc., are sold in Germany seem cheap from an American standpoint.

AUTOMOBILES.

Judging from the constantly growing automobile industry in Germany within the last few years, it must be admitted that automobiles are gaining in favor. There are quite a number in use in this city, mostly tricycles for one, two, or more persons. The motive power is either electricity or benzine; but owing to the heavy weight of the accumulators electric motors are only feasible on very good roads, and as this motor is dependent on charging stations, the benzine-driven automobile has the preference, although the mechanism of the former is more simple and there is no noise nor offensive odor. The use of compressed and liquid air as the motive power, or of a combination of benzine or electricity with steam, has not met with favor. The battle for supremacy seems to be between electricity and benzine. American manufacturers of first-class automobiles should have good chances in this country.

No automobiles are manufactured in this consular district.

RICHARD GUENTHER,
Consul-General.

FRANKFORT-ON-THE-MAIN, *May 4, 1900.*

KEHL.

AUTOMOBILES.

The only firm in this district that I can learn of as doing a business of any importance is De Dietriech & Cie, of Niederbronn, who have lately undertaken the manufacture of automobiles, in addition to their other work, under the patents of Amédée Bolleé, and are making quite a large variety of automobiles. I understand they have now all the work on hand that they can attend to. What their output is, however, I am unable to say.

AMERICAN VEHICLES.

As to the competition of American wagons, I doubt greatly if one is to be found in Alsace-Lorraine. There are, however, I understand, a few in use in Baden-Baden.

A. WOOD, *Consul.*

KEHL, *May 17, 1900.*

MAINZ.

GERMAN VS. AMERICAN VEHICLES.

All vehicles manufactured in Germany are much heavier and clumsier looking than American vehicles, owing to the fact that hickory does not grow in the country. German manufacturers are, therefore, obliged to use, in the construction of their carriages and wagons, wood which has not nearly the strength of hickory, and must be much thicker, especially for wheels.

The type of vehicle known as buggy in the United States I have never yet seen in this country, and in and about Mainz it is entirely unknown. One of our light piano-box buggies would cause a sensation in this city; people would expect to see it break down at any moment. The broughams and carriages look respectable, but still can not compare with American carriages of like type. The victorias are rather old fashioned, and remind one of the victorias used in the United States twenty to twenty-five years ago.

TRUCKS AND CARTS.

The trucks used in this part of Germany are entirely different from those used in the United States. The body of the truck is very low, quite long, and longitudinally level, whereas the cross section is curved, which causes all articles thereon to slide or roll toward the middle, and prevents the goods from falling off; this is necessary, as there are no sides to the truck.

The four wheels are almost of equal size, and are entirely beneath the body of the truck. There is no driver's seat, the driver either walking along the side of the truck or sitting on the side of the platform with his feet dangling over. Every truck, carriage, and cart is supplied with brakes. The two-wheeled dirt carts are also very clumsy affairs.

American competition is wholly unknown in these parts, and I think there is an excellent opening for an enterprising American firm who will take the trouble to send a representative over here to study carefully the conditions and requirements.

The import duty on wagons in the rough, not painted, varnished, or upholstered is 3 marks per 100 kilograms (71.4 cents per 220.46 pounds); on wagons painted or varnished, but not upholstered, 10 marks per 100 kilograms ($2.38). The duty on iron or steel axles is charged separately, and amounts to 10 marks per 100 kilograms. The import duty on finished upholstered carriages is 150 marks ($35.70) each, irrespective of value.

AUTOMOBILES.

In this part of the country the automobile is not gaining favor very rapidly. There are only two or three machines of this type in Mainz. The board of aldermen of this city recently refused to grant permission to a large company to run automobile cabs and carriages as public conveyances in this city.

WALTER SCHUMANN, *Consul.*

MAINZ, *March 27, 1900.*

MANNHEIM.

CARRIAGES.

The few carriages in use here are clumsy affairs as compared with modern American carriages. Single buggies, phaëtons, surreys, fancy traps, etc., are not in use. An occasional two-wheel conveyance of American or English design is seen here, but it generally belongs to a temporary resident. The number of modern carriages of the brougham and Berlin coach type in use here is very small. There is no factory in this district devoted to the manufacture of what may be regarded as modern carriages, chiefly because there seems to be small demand for them in this locality.

As is well known, hitching posts are not permitted in German cities and all carriages must provide for a driver. He is generally provided with a seat in the front part of the carriage, though occasionally the seat is in the rear. Physicians in Mannheim use a carriage the rear part of which is much like an American round-top phaëton, with seat in front for driver.

While German public roads are ideal for driving, it can not be said that the German in this locality cares for driving or that he is a horseman. One very rarely sees a carriage of any kind in the country, and as the cities are compactly built and suburban residences scarcely known, the keeping of driving horses is much less common than in the United States. Many American villages of 2,000 or 3,000 people have more good driving horses and carriages than this city of 150,000 people.

The German here is quite content as a rule to go to a funeral, or to the theater, or the annual races with his family, in a heavy cab hired for the occasion and drawn by one horse of poor quality. He is not a horseman in any sense, and until he radically changes in this regard modern pleasure carriages will not be in demand in this consular district. It is safe to say that any vehicle designed for this market would have to be built with special reference to strength and durability. It is no commendation to the German that a tool or a carriage is low priced, if it will not last well.

WAGONS.

The wagon industry in this district is backward. Many of the delivery wagons are handsome and well finished. The wagons used for hauling purposes are generally heavy and clumsy looking. The trim two-horse farm wagon of the United States is unknown here. The wagons in use by the peasants are of the simplest type, clumsy, and heavy in construction, and by careful use and housing do service for two or three generations. A tongue or pole, and not shafts, is generally used in wagons drawn by one horse.

HANDCARTS.

Hundreds of handcarts are used in this, as in other German cities. These are generally heavier than the American handcart, the wheels and axles being much like those of our two-horse wagons in the United States. These and heavy hand wagons are much used in delivering goods from stores, by mechanics in moving building materials, by milkmen, etc. Deliveries of meats are made from the city slaughterhouse on carts, not infrequently the carcasses of two beeves being hauled on one cart by men assisted by dogs.

BICYCLES.

The bicycle industry in this consular district is very large, being represented by six or seven factories of varying output and by several agencies of wheels manufactured elsewhere.

The Lozier Manufacturing Company is the only American company which can be said to be pushing our bicycles in this consular district. Their wheels are on sale in the district, and they have a catalogue and other matter handsomely printed in German.

The prices paid for the German wheel here are much higher than for wheels of the same grade in the United States. The better wheels retail here at from 250 marks ($59.50) up to 400 marks ($95.20). It is doubtful whether these wheels are as good as the wheels retailing at from $40 to $60 in the United States. They are at least a fifth heavier and are not so handsome or well finished. One only of the local factories uses wooden rims. It is claimed here that wooden rims have shown a tendency to warp and twist out of shape, and they are not in favor in the factories. I am of the opinion that our manufacturers of wooden rims might secure business here by judicious methods and by proper guaranties of their wares. Bicycles are much in use throughout this district. Nearly 10,500 are licensed in the city of Mannheim alone.

Three-wheeled machines are widely used by bakers and other merchants in delivering their wares, and, to some extent, by the post-office department in collecting mails from the city boxes.

AUTOMOBILES.

The automobile industry in this consular district is an important one. Many automobiles are in use in Mannheim. A paper called the "Automobilist," devoted wholly to automobile matters, is issued weekly here, in connection with the "Radtourist," devoted to bicycle matters. An automobile club, known as the "Rheinischer Automobile Club of Mannheim," has a large membership, and by races and other means keeps up an interest in the machine. On May 13 of this year, automobile races over a route 170 kilometers (104 miles), starting from Mannheim, were participated in by twenty-four different riders with machines from the various factories of southern Germany. On the day preceding the races an exhibition of automobiles and automobile appliances was given in this city and visited by many people.

The principal automobile factory in this district is that of Benz & Co., of Mannheim, who employ 800 men and have a capacity of three finished automobiles per day. They are just now making extensive additions to their plant.

The Benz company use only hydrocarbon (gasoline and benzine) motors on their carriages. They claim to be the pioneers in building this form of carriage, and exhibit at their factory what they term the "first spirit-motor carriage in the world," patented in Germany under date of January 29, 1886. This carriage, with five handsomely finished carriages of their late models, form the company's exhibit at the Paris Exposition. The company exhibited at Chicago in 1893, and have taken an active part in the continental expositions, including the exhibit in Berlin in September, 1899, and in the races which formed a part of that exhibit.

In the Mannheim races of May, above referred to, the company had carriages in three of the four classes competing, and received first prize in each class.

Mr. Charles Benz, the inventor and patentee of the first spirit-motor carriage, is at the head of the mechanical department of the present company. He and his associates claim that their machines excel in simplicity of construction, in speed, in durability, and ease of management. They are adapted for the use of gasoline or benzine.

The cost of running the lighter vehicles over average roads is about one-half cent per mile. The ordinary carriage is equipped for a distance of from 50 to 80 miles without additional fuel. The company devotes itself especially to the building of general-purpose carriages for from two to six persons and of from 3 to 8 horsepower. Their later carriages are fitted with rubber tires, either solid or pneumatic, and have every appearance of excellence of finish. About 2,500 of their carriages have been sold. The market is principally in Germany, although their machines have been exported to some extent. A small number have gone to the United States. The machines retail at from $600 upward.

A new factory for the manufacture of automobiles has recently been started at Ludwigshafen and is said to be backed with abundant capital. The concern employs about 75 men and is only fairly started. The machine shop is in a high, well-ventilated building, and is equipped for the most part with American machinery. This factory will build hydrocarbon-motor machines. Only a few machines have been completed.

The Kayser Bicycle Company, a large concern at Kaiserslantern, in this consular district, has begun the building of motor tricycles designed for one or two persons only. The business is an experiment, with uncertain promise of success.

CAPITAL INVESTED.

It is impossible to obtain much information as to the capital invested in the vehicle industry in this district. There are no factories building wagons or carriages on an extensive scale. If there were they would be slow about giving information on this point. Benz & Co. is a corporation capitalized at 3,000,000 marks, or approximately $750,000. The Luxische Industriewerke, of Ludwigshafen, is a corporation the amount of whose capital I am not able to state.

WORKMEN AND WAGES.

It is difficult to give definite information on this topic. German machinists and other mechanics are not as a rule as skillful and fine in their workmanship as American workmen in the same line. They do not have as good tools to work with and they do not work with the precision and accuracy that is considered essential in the United States. A gentleman just now putting in place a large amount of machinery from the United States in a factory in this district, tells me that it is almost impossible to get local mechanics who will compare with ours in the handling and adjustment of machinery. He says they are much slower and have much less regard for accuracy and precision than our own workmen. The wages paid are much lower than in the United States, though how much less or what the average wages paid machinists and other skilled mechanics is I am unable to learn.

OUTLOOK FOR AMERICAN VEHICLES

It is doubtful whether our carriage manufacturers will find this locality a market for the light vehicles so common in the United States. If the manufacturer would get a footing here, it must be with wagons and carriages that conform to the German idea of durability and, in the case of carriages, that provide for a driver's seat. The German here, however well to do he may be, is not a horseman and cares nothing about holding the lines.

The automobile industry in Germany is comparatively new, as it is in the United States. The German inventor and manufacturer has taken hold of the business with a splendid show of enthusiasm. Large factories are springing up all over the Empire. Several papers are devoted to the subject. At least one quite large book on the subject has been on the market for several months. Automobile races, automobile exhibits, and automobile clubs are attracting much attention throughout the Empire, and it will be strange if the German automobile does not enter the field as a vigorous competitor.

H. W. HARRIS, *Consul.*

MANNHEIM, *July 4, 1900.*

NUREMBERG.

Nearly all the carriages seen here are manufactured in other German cities, like Stuttgart, Coburg, and Frankfort-on-the-Main. The few vehicles built here are chiefly of the heavier kind for local trade and some mail carts for the royal post-office.

As to the automobile industry, I would say that some of the cycle factories in and around Nuremberg have taken up the making of automobiles, but so far have produced nothing but samples. The few automobiles seen here, about six, are either from Benz, in Mannheim, or Daimler, in Stuttgart.

GUSTAV C. E. WEBER, *Consul.*

NUREMBERG, *March 23, 1900.*

WEIMAR.

There are three cities in the Weimar consular district where the vehicle industry is at present carried on, i. e., Weimar, Gotha, and Eisenach. In the two former cities this industry consists of the manufacture of railway passenger and freight cars, and in the latter city of automobiles.

Only the Weimar Waggon-Fabrik would consent to furnish this consulate with statistics as to the output, etc. This company manufactures 250 railway passenger and freight cars per annum. The capital is not stated.

The number of employees is between 360 and 400 men, who earn about $83,000 per annum.

The names and addresses of the vehicle manufacturers in the Weimar consular district are: Waggon-Fabrik, A. G., at Weimar; Waggon-Fabrik, Gotha, and Fahrzeugfabrik, Eisenach.

In regard to the historical aspect of this subject, there is nothing to be said, these factories having only been established within the last few years.

The automobile is not yet much in use in this district. There are none in the city of Weimar. No American automobile is in use in this section, so far as careful inquiry reveals.

THOS. EWING MOORE, *Consul.*

WEIMAR, *April 11, 1900.*

CARRIAGE AND WAGON WHEELS IN GERMANY.[1]

The demand of Germany on the United States for the material of which wagon wheels are made is yet comparatively small in proportion to the material used by the home wagon makers, and is confined mostly to hickory spokes, moderate quantities of rock-elm hubs, and some wood for fellies, as well as some bent fellies. All these articles come into the country at the nominal import tariff of 30 pfennigs (7½ cents) for 100 kilograms (220.46 pounds), which rate pays but little, if any, more than the handling through the custom-house, it being one of the policies of the Government to admit any raw or crudely manufactured material used in German manufactures either free or at as low a tariff as can possibly be afforded. It is quite impossible to ascertain, even approximately, the amount of imports of these articles, either in general or from the United States, separately, because in the records they are classed with other wooden ware coming from turning shops and with the crude, which pay the same tariff rate. It is safe to say, however, that the imports are mostly from the United States. Of home woods and those brought from neighboring countries, German oak, elm, ash, and locust are mostly used, oak having the preference for heavy trucks and wagons.

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[1] Republished from Consular Reports for May, 1898, No. 212.

In the manufacture of wagons or other vehicles for export Germany takes no prominent place, supplying some of the neighboring countries only to a moderate extent. Having the most excellent forestry laws, the supply of home woods of the more valuable class is kept up to the extent possible in a country so thickly populated; so it seems likely that the imports of wagon material will not vary much from year to year, and that the demand for hickory spokes will be entirely filled from the United States. There have been dealings by the larger traders and manufacturers with that country for years.

In ready-made wheels, on which, unpainted, the import tariff is 3 marks (72 cents) per 100 kilograms, the trade thus far is exceedingly light. Here a peculiar spirit opposes innovations. It may be called the spirit of guild (Zunftwesen), not known exactly in that way in the United States, yet resembling the different mechanics' labor unions. These guilds have an excessively conservative influence in the management of all affairs pertaining to industries, and are jealously watching to keep the balance of power in their favor.

Thus, the blacksmith union opposes as much as possible, by all legitimate means, the introduction of such wheels as the "Warner" and the "Star," and so far the wood-hub wheel appears to be the one legitimately trusted in Germany.

Some few bolder dealers and manufacturers, who are willing to take the chance of a possible silent boycotting by the wagon makers, are beginning to experiment with importing these wheels, some of which have become known here by whole carriages having been imported. The naïve objection to them by the blacksmiths is that "they hardly ever need repairs."

Should these wheels assert their superiority in the long run, as they already have in England, the demand for them will come. So far, however, the wood-hub wheel is the wheel in Germany.

As to selling or disposing of wheels or wheel material here, it should be remembered that Berlin is becoming every year more and more the manufacturing, mercantile, and distributing center of Germany, and that if any American exporter wants to do a safe and paying business in Germany a simple agency in Hamburg will not do it. A good, bright man, thoroughly familiar with the article which is to be sold and the handling of it, understanding the German language—unless he can bear the expense of a good interpreter—should come to Berlin and sell the goods himself; or, what is still better, establish a branch house here.

Whether the trade in wagon wheels and the material used for them can be made large enough to pay for such a branch house I can not with safety assert; but I believe that such a house would not only get the trade for the manufacturer establishing it, but would also, by the facility of seeing exactly what is wanted here, create new business for his American factory.

Berlin manufacturers and dealers, I understand, are supplied with American wagon-makers' material by factories located in New Jersey, Indiana, Pennsylvania, and by one large concern in Buffalo, which shows that they are quite familiar with American goods in this line.

JULIUS GOLDSCHMIDT,
Consul-General.

BERLIN, *October 23, 1897.*

GREECE.

VEHICLE INDUSTRY.

In the beginning of this century, Greece had but very few manufactories in existence, and there was not a vehicle manufactory within its boundaries. In 1850 Greece had enjoyed her new-born freedom nearly a score of years, and many of her long-slumbering industries were awakening and commencing new life, among which was the manufacture of vehicles. A number of small establishments were annually turning out a few of the rough, strong, and heavy two-wheeled carts used by the peasants, but it was more than a decade later that a first attempt was made to manufacture carriages and other nicely finished four-wheeled vehicles.

In 1861, the first carriage manufactory known in modern Greece was established in Athens by the Rossi Brothers, by whom it is still conducted, who have made it a successful enterprise that is a credit to themselves and the city. From that date to this, the manufacture of fine carriages and a variety of other well-finished vehicles has been a fixed industry in Athens, and it has steadily increased in importance until it has grown to be one of the leading industries of the city. But outside of Athens there are no carriage manufactories in the Kingdom, and only small establishments in a few of the leading towns which make and repair the common heavy carts.

The Rossi Brothers, besides being the pioneers in the carriage-manufacturing industry, are still the leading firm in that line in the Kingdom, both as regards the extent of the plant, the number of employees, and the annual output of first-class carriages. They employ 50 to 60 hands and manufacture 25 to 30 vehicles, nearly all finely finished carriages, annually.

The manufactory of Lorenzo Manos occupies second place as regards size of plant, number of employees, and annual output, and third as to date of establishment. His plant was established in 1874, employs 35 to 40 hands, and manufactures 40 to 50 vehicles of various styles yearly, mostly of the well-finished light omnibus, delivery wagon, and "susta" patterns. A "susta" is a light but strong two-wheeled vehicle on springs, sometimes fitted with a top, and is used by peasants and country merchants for carrying passengers, produce, and goods to and from the larger towns and cities.

The third in size of the vehicle manufactories of Athens is owned and operated by Sebastore Versace. It was established in 1870, employs 25 to 30 hands, and its annual output is 20 to 30 vehicles, mostly of the surrey, light omnibus, and "susta" patterns.

Besides the three firms above named, there are a number of smaller establishments in Athens for the manufacture of vehicles, among whom we may name Michael Scordara, Manouil Pedoura, Pietro Metzes, and David Augustine.

The leading firms are prepared to manufacture almost any style of well-finished carriage to order, but they seldom keep any finished carriages in stock. While the carriages built in Athens have not as fine a finish as those manufactured in the United States, they show skillful and creditable workmanship.

WAGES.

The employees of the vehicle manufactories of Greece are not, as a rule, very skillful workmen, but many of them become very skillful experts in their trade. Their wages range from 3 to 10 drachmas[1] (36 cents to $1.20) per day.

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[1] The consul estimates the drachma at 12 cents.

VEHICLES MANUFACTURED.

The following is a list of the vehicles manufactured in Greece, with their prices expressed in paper drachmas, $1 equaling 8.30 drachmas at the present rate of exchange:

Description.	Prices.	
	Drachmas.	United States equivalent.
Coupe de Gala	12,000-14,000	$1,440-1,680
Berlin de Gala	15,000-20,000	1,800-2,400
Coupes	4,000-5,100	480-612
Vis-a-vis	2,500-4,000	300-480
Landaus	5,000-6,800	600-816
Omnibuses	2,500-3,300	300-396
Cabs	3,000-4,000	360-480
Dorsays	5,000-6,000	600-720
Victorias	3,500-5,300	420-666
Tilburys	1,200-1,500	144-180
Pony carts	1,200-1,500	144-180
Dog carts	1,500-2,000	180-240
Chariots	1,100-1,500	132-180
Phaetons	1,800-2,700	216-324
Wagonettes	1,800-2,300	216-276
Surreys	1,200-2,000	144-240
Traps	1,000-2,500	120-300
Sustas, with tops	750-1,200	90-144
Sustas, without tops	600-850	72-102
Heavy carts	450-700	54-84

There are no published statistics of this industry in Greece, and figures relating to it are more guesswork than anything else. The number of vehicles now manufactured annually in the Kingdom is estimated at from 60 to 100 first-class carriages, and from 180 to 300 sustas, strong surreys, wagonettes, light omnibuses, traps, etc., and a much larger number of common heavy carts. The amount of capital now invested in this industry in Greece is variously stated at from 1,700,000 to 2,500,000 drachmas ($208,000 to $300,000).

OPENING FOR AMERICAN MATERIALS.

The necessary materials for the manufacture of vehicles are not produced in Greece. Most of the iron and steel for this work comes from France and Germany, the greater portion of the wood from Austria, France, and Italy, and nearly all of the leather from France and England. The Greek manufacturers of vehicles are very anxious to procure their materials from the United States, believing that they can obtain materials of a better quality there, and, on certain conditions, as low in price as those they now use. The principal condition to insure low prices on the American materials is that a direct line or lines of steamships connecting Greece with ports in the United States be established, so as to save the expense of the middleman and transshipment.

The local prices for such materials are very high in most cases, and in some are seemingly exorbitant. If American exporters will see to it that a direct line of steamships is established between Greek and

United States ports, they will find a good market here for a great many American products, and it will then be a matter of but a few years' time until the United States supplies Greece with the larger part of its imports. The Greeks are beginning to understand that American machinery, tools, and various other products are far superior to those produced in Europe, and they are desirous of procuring them, if their cost delivered here is not too much in excess of European prices.

The machinery and tools used in the vehicle manufactories of Greece are nearly all imported from France, and it does not require the eye of an expert to see that they are inferior to those produced in the United States for such purposes, both as to make and finish, and the Greek manufacturers are becoming aware of this fact. As they take pride in turning out good work, the Greek vehicle makers desire to procure the best machinery and tools possible, and exporters of the United States should see to it that they are supplied.

TARIFF ON VEHICLES.

The vehicle manufactories of Greece are protected by a high tariff on all manufactured vehicles imported, which insures a steady and healthy growth of the industry in the Kingdom.

The duties on manufactured vehicles imported into the Kingdom, as given in the latest tariff publication[1] of the Greek Government, per 100 okes (284 pounds):

Description.	Duty.	
	Drachmas.	United States equivalent.
Two-wheeled carriages	132.25	25.57
Four-wheeled carriages	396.75	76.72
Handcarts and bicycles	13.28	2.55
Two-wheeled freight carts	26.45	5.11
Four-wheeled freight carts	52.90	10.21
Delivery wagons	39.68	7.66
Railway and tramway freight cars	(a)	(a)
Railway and tramway passenger cars	(a)	(a)
Handcarts for merchandise	(b)	(b)

a Ten per cent ad valorem. b Twenty per cent ad valorem.

AUTOMOBILES.

No automobiles are manufactured in Greece, and thus far but two have been imported, both into Athens; but it is said that many Athenians wish to purchase such vehicles, and it is expected that quite a number will be imported in the near future.

DANIEL E. MCGINLEY, *Consul.*

ATHENS, *June 8, 1900.*

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[1] According to the Greek tariff the duties are payable in metallic money; hence the reductions are made on a gold basis—19.3 cents per drachma.

ITALY.

VEHICLE INDUSTRY.

The vehicle industry is not anywhere in Italy of very great importance. A large number of vehicles of all categories are manufactured, more especially cheap one-horse carriages, for the public service in the cities.

There are many small factories scattered all over the country, employing, on an average, from 7 to 15 workmen.

Some of the principal works are devoted to the construction of railway and tram cars, the largest of which are located in Milan. The following are the provinces where the carriage industry has a certain local importance:

Alessandria.—Four small factories in the commune of Asti, employing 15 men in all, and one in the commune of Moncalvo, employing 7 workmen.

Ancona.—Eight small cart and carriage factories, with 33 workmen.

Aquila.—Four shops for the manufacture of vehicles of various sorts, one of which is especially devoted to the construction of carriages.

Ascoli Piceno.—Two factories, principally of carriages, one with 30 and the other with 27 workmen.

Avellino.—In the capital commune there are two shops, with 9 workmen.

Bari.—In the whole province there are 15 cart and carriage factories, with 44 workmen.

Belluno.—One carriage factory, with 8 workmen.

Bergamo.—This province possesses the most important factory of the kind founded at the beginning of the century; it employs 19 workmen. Eight other minor factories employ in all 52 workmen.

Bologna.—Ten carriage factories, situated in the capital city, the most important of which employs 36 men. In all the ten factories are employed 103 adults and 28 boys. Fourteen other small factories scattered over 9 communes of the province employ in all 41 workmen.

Brescia.—Fifteen factories and 125 workmen.

Caserta.—In 7 communes of the province they manufacture and repair carts, carriages, and vehicles in general for good roads; there are employed in this industry 92 workmen.

Catania.—Six carriage factories.

Catanzaro.—One factory of carts and carriages, employing 3 men.

Chieti.—One cart and two carriage factories, with 14 workmen in all.

Varese.—Four very important factories, of carts and carriages, with 145 men.

Lecco.—One carriage and four cart factories, with 16 workmen, and five minor ones, with 16 workmen in all.

Cosenza.—Three small factories for carts and other vehicles for the road, employing in all 6 workmen. Other three, with 7 men, at Corigliano Calabro, and one with 2 men in the commune of San Marco Argentano.

Cuneo.—One shop in Savigliano produces railway cars; besides there are 21 factories for the production of carts and carriages, with 105 workmen in all. Only two of these factories are furnished with hydraulic motors.

Cremona.—Three factories, with 29 workmen.

Ferrara.—Three shops, two in Ferrara and one in Cento turn out rough-finished carriages, employing 17 workmen.

Florence.—Twenty-nine factories, large and small, four of the most important of which make use of mechanical motors; all employ about 90 workmen; in the whole province there are engaged in this industry 263 men.

Forli.—Seven carriage factories, with 26 men.

Lecce.—Eleven factories of carts, carriages, and other vehicles, with 43 workmen.

Mantova.—Two factories in the commune of Bozzolo, with 20 workmen, producing each year 75,000 lire ($9,000) worth of carriages. They manufacture also vehicles of every sort, and they are highly esteemed for their double qualities of beauty and strength.

Milan.—Nine factories are engaged in the manufacture of bicycles, employing 60 men; further, there are nineteen factories with 300 workmen, seven in Milan and the rest in the province, for the manufacture of carriages.

Modena.—One carriage factory, steam motor, employing 11 workmen.

Naples.—Seventeen carriage factories are found in the capital commune; the most important factory employs 62 workmen and is operated by an engine of 4 horsepower. The rest are worked by hand and employ in all 175 workmen. In the commune of Ottaiano there are ten factories for carts and road vehicles, employing in all 48 men, and using hard wood, such as oak and mulberry, brought from the province of Avellino.

Castellammare.—In this commune there are five shops, with 26 workmen, making carriages from hard wood, such as walnut and poplar woods from the neighborhoods.

Padua.—One important factory for the manufacture of carriages and railway carts, employing 28 workmen; in other small works of the province there are employed 60 workmen.

Parma.—Three factories, employing in all 27 workmen; one of these is exclusively devoted to the manufacture of carriages and employs 13 men; one other, with 10 workmen, to the manufacture of carts.

Ravenna.—One factory for the manufacture of bicycles, and nine for the construction of carriages: four factories in Faenza, one in the city of Ravenna, and four in Bagnacavallo, employing in all 52 workmen.

Siena.—One carriage factory, with an annual output of 20 vehicles; seven other small cart factories at Rappolano, employing 9 workmen.

Treviso.—One important factory at the capital commune, and nine others in six communes of the province for the constructing and repairing of carts and other road vehicles, employing in all 63 workmen; at Rocande there is a shop for constructing and repairing bicycles with 8 workmen.

Udine.—One carriage factory at Palmanove, employing 11 workmen, and a number of others scattered about the province, employing some 150 men in all.

Verona.—Eight carriage and cart factories, employing in all 46 men.

Vicenza.—Some small factories, employing about 60 workmen in all.

In Rome there are about ten factories (one of which is more important than the balance put together), employing altogether some 200 men.

The leading manufacturers of carriages, vehicles, in Italy, are the following: Belli Cesare & Son, Varese; Francesco Belloni, Milano; Vincenzo Benvenuti, Sangiovanni A. Teduccio, Naples; Borelli & Schenome (bicycles), Turin; Bottazzi Raimondo, Rome; Ferretti Carlo, Rome; Ernesto Breda & Co. (rail and tram cars), Milan; Costruzioni meccaniche, Saronno, Milan; Cappelli & Ci., Brescia; Diatto Brothers, Turin; Eugenio Ferrari, Milan; Fusi & Co., Milan; Grandona Comi & Co., Milan; Macchi Brothers, at Varese; Miani Sivestri, Milan; Nardi, H., Bozzolo; Henry Orsaniga, Milan; Pavesi & Crispi, Milan; Pieresca Brothers, Treviso; Ponsini Leopoldo, Milan; Prinetti Stucchi & Co. (very important, moto-cars and bicycles); Cesare Sala, Milan; Societa Nazionale delle Officine di Savigliano, Torino; Riccardo Stipel & Waimann, Milan; Trinci and Figlio, at Pistoia.

EXPORTS.

The total exports of vehicles from Italy during the year 1897 amounted to about $120,000, representing some 1,214 pieces, of which 1,036 were bicycles and the rest vehicles of various characters.

In 1898, the exports amounted to about $170,000; in 1899, $180,000. This last year shows a decrease of about $40,000 in the exportation of bicycles, and an increase of about $50,000 in the exports of other vehicles.

There are no statistics to be obtained as far back as the year 1800, but it can be safely said that the carriage industry has largely decreased in the last forty years, owing to the introduction of new means of transportation, such as railways, tramways, and especially the increasing use of bicycles.

WAGES.

Foremen receive from 6 to 7 lire (72 to 84 cents) per day; woodworkers from 2 to 4 lire (24 to 48 cents), according to their ability; ordinary workmen from 2.50 to 3 lire (30 to 36 cents); blacksmiths from 2.50 to 5 lire (30 to 60 cents); apprentices from 0.55 centimes to 1.50 lire (7 to 18 cents; painters from 2 to 3.50 lire (24 to 42 cents); upholsterers from 2 to 3.75 lire (24 to 45 cents); all per day. The foremen of each of these various departments receive on an average 1 lire (12 cents) more than the highest pay of the workmen. These prices are, as a rule, for ten hours day labor. The workmen are paid every week.

AUTOMOBILES.

The moto-car industry is still in its infancy. Two concerns of importance have started works in Milan, viz, Prinetti Stucchi, having a very large plant in connection with their carriage and bicycle works, and C. Bianchi. There is also one establishment for automobiles in Rome, but it is of recent creation and has not reached any importance. A certain number of automobiles of foreign make have been introduced into this country and have met with public favor, which should be encouraging for the future development of that industry in Italy.

HECTOR DE CASTRO, *Consul-General.*

ROME, *June 13, 1900.*

CARRIAGE AND WAGON WHEELS IN ITALY.[1]

Owing to the fact that the Italian customs does not keep a separate entry for wagon and carriage wheels, they being classed with "wagons and vehicles with two or more wheels," it is impossible to gather any information from that quarter.

The imports into Italy in 1896 were: Wagons, $7,500; bicycles, $166,000, of which $39,000 worth was from the United States; cabs and carriages, $49,000, of which $5,000 worth was from the United States.

Personal inquiries from carriage manufacturers have generally remained unanswered; but one manufacturer here in Rome, who is considered to be the best in Italy for high-grade vehicles, informs me that he imports all the wood, timber, and varnishes he requires for his trade from the United States; the springs, upholstering, and trimmings from France, and the iron and other material necessary for other parts of carriages from Sweden.

The ordinary carriage trade is very extensive in Italy, but nearly all the material used is of domestic production and manufacture.

HECTOR DE CASTRO, *Consul-General.*

ROME, *October 7, 1897.*

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[1] Republished from Consular Reports for May, 1898, No. 212.

NETHERLANDS.

VEHICLE INDUSTRY.

Statistics regarding the industry do not exist in the Netherlands, nor are there any publications containing information on the subject. For estimates and general information I have applied to some 40 of the principal manufacturers and dealers in carriages, but the majority declined to furnish me with any particulars, while the data received from some hardly covered a part of the subject. By some manufacturers I was informed that the information wanted did not concern the American export trade. All this shows that parties interested in the vehicle industry seem to fear American competition to such an extent that they are afraid of divulging anything relative to the importance of the industry.

It will, under the circumstances, be understood that the information which follows here, and which was principally obtained from a gentleman who, though not interested in the industry, has dealings with vehicle manufacturers, is only based on estimates and personal observation, and may therefore not be entirely accurate.

The vehicle industry is of importance in Amsterdam and Haarlem, province of North Holland; in Utrecht, province of Utrecht; Groningen, province of Groningen; The Hague, province of South Holland, and S'Hertogenbosch and Dongen, province of North Brabant.

There are about 50 vehicle factories in the Netherlands. The total number of vehicles manufactured by them per annum is estimated to be from 3,000 to 4,000. This includes broughams, landaus, victorias, cabs, carts, berlines, tilburies, drays, wagons, and automobiles. About 300 carriages, of which 100 are fancy carriages, are manufactured per year. The capital invested in the industry is supposed to be about $2,000,000.

WAGES.

I have not been able to obtain an estimate of the number of employees engaged in the vehicle industry. It is stated that in the various vehicle factories 1,500 men are employed in the manufacture of wagons. The earnings of employees in the vehicle factories are from $4 to $7.20 a week, with the exception of enamelers, who earn from $6 to $8 a week.

VEHICLE MANUFACTURERS.

Besides the manufacturers, there is at least one wagon maker in every town and village. There are said to be about 10,000 of them in the Netherlands.

Three of the principal vehicle manufacturers work with a capital of from $200,000 to $400,000 each.

Messrs. Spyker Brothers, of Amsterdam, very prominent vehicle manufacturers, are said to have visited the United States to study American methods, which they have introduced in their factories. This firm, in reply to my request for information on the vehicle industry, wrote me as follows:

> Carriages and other vehicles are, with a few exceptions, mostly made by hand in small shops. We think we can safely say that business in this line is very unsatisfactory and decreasing from year to year, owing to a general lack of prosperity among those that keep horses and carriages as a luxury, and also to the poor condition of the farmers, and the improved means of communication in this country by means of street cars, railroads, etc. Freight wagons are not generally used, as we have our transportation by water. Farmers' wagons are not wanted to any extent, as our farmers are engaged principally in cattle breeding and dairying.

HISTORY OF VEHICLE MANUFACTURE.

In 1800 there was no vehicle industry whatever. In 1850 most vehicles were imported from Belgium. At the present time sufficient capital and labor is employed to supply the local demand, and some of the larger manufacturers even export.

AMERICAN VS. FRENCH BUGGIES.

It is estimated that about 50 vehicles are imported in the Netherlands per annum, principally buggies from France, which are claimed to be more strongly built than the American buggy.

PRICES.

Two or three of the large manufacturers have catalogues and price lists, but, although I have made application for them, I have failed to obtain them. From the proprietor of one of the large livery stables here I learned that the livery stables very seldom purchase carriages from the manufacturers. When they are in need of a carriage they contract with a wagon maker for the woodwork, with a saddler for the leather, and with a painter for the enameling. Carriages obtained this way will cost as follows: Victorias, from $300 to $400; landaus and cabs, from $350 to $800. The livery man stated further that if he had to purchase at the factories, his carriages would cost him considerably more.

VEHICLES IN DEMAND.

The vehicle mostly used by the farmers for driving purposes is the so-called tilbury, a very clumsy kind of buggy with rather heavy wheels. There are about 3,000 of these in use, and they are generally made by the local wagon makers, as are also the wagons, of which there are about 25,000 in use, excluding drays, dump carts, etc. Tilburies are sold at about $200, and wagons at from $100 to $300, according to size and finish. For tilburies and wagons each province has its own model.

In the southern part of this country much stronger vehicles are in demand than in the northern part, on account of the roads, which are gravel in the north and basalt stone in the southern part.

Vehicles are mostly made of oak and ash wood, but the wheels of fancy carriages of American hickory.

MANUFACTURERS.

The largest factory in the Netherlands where carriages are manufactured is the "Royal Factory for Carriages and Railroad Cars, J. J. Beynes," at Haarlem. This concern is also the principal one which manufactures railroad and street cars, for use here and in the Dutch colonies. I could, however, not obtain any information from this company, not even in regard to the material used.

Names and addresses of leading manufacturers in the Netherlands are as follows: Gebroeders Spyker, Amsterdam; H. J. Overmeyer & Son, Amsterdam and Hilversum; N. H. van Lient, Amsterdam; Joh. M. Langeman, Amsterdam; J. H. van der Meulen, L. C. zn., Amsterdam; M. L. Hermans & Co., The Hague; W. Goljaard, The Hague; B. F. van Ryswyk & Son, The Hague; J. J. van den Berg & Dolman, The Hague; Ned. Maatschappy van rollend materiaal, formerly Peunsch & Co., The Hague; J. L. Mackenzie, Rotterdam; J. C. Dolk, Rotterdam; B. Veth, jr., Arnhem; Clarys Frères, Breda; Biltsche Rytuigfabriek, De Bilt, Province Utrecht; Weterman & Van Brakel, Deventer; G. J. Donderwinkel, Doesburg; F. Oostwoud, Franeker; C. A. Teurlings, 'sHertogenbosch; F. H. Lathouwers, 'sHertogenbosch; Royal Factory for Carriages and Railroad Cars, J. J. Beynes, Haarlem; Gebroeders Kimman, Haarlem; P. de Hoo Fzn., Leeuwarden; Kleine Hermans, Maasbracht; Th. Egbers, Nymegen; Plaum & Drevers, Nymegen; G. J. W. de Bouter, Utrecht; H. B. Gielen, Utrecht; R. van der Monde, Utrecht; A. van der Poel, Utrecht; Buitenweg & Co., Velp; A. Nieboer, Winschoten; H. Cezar, Winschoten; G. Uitman, Zeist; Firma G. ten Cate, Zutphen; M. Boezeman, Zwolle.

AUTOMOBILES.

The leading manufacturers of automobiles in the Netherlands are: Gebroeders Spyker, Amsterdam; Maatschappy Gelria, Arnhem; M. W. Aertnys, Nymegen; Groningen Motor Rytuigen Exploitatie, Groningen.

Thus far, about 80 automobiles have been manufactured in the Netherlands, and the capital invested in that industry is estimated by Mr. M. Adler, a dealer of Amsterdam, at not more than $800,000. He thinks that about 150 employees are engaged therein.

There are at present about 180 automobiles in use in the Netherlands, 100 of which are imported. The total number of automobiles and motor cars imported during the last three years from France and Germany was about 175.

Automobiles have thus far not been very popular in the Netherlands, and will probably not become so until the prices at which they are sold ($600 to $1,200) have gone down considerably. With the smooth level roads of this country there would probably be a very good field for them here if the cost were less.

OPENING FOR AMERICAN VEHICLES.

In conclusion I beg to say, in regard to American vehicles, that I think there would be a good opening for them here. The difficulty has thus far been that there has not been sufficient American stock in the country. Some years ago two very energetic young men, who had been in the United States, started the importation of American buggies, etc., but as they did not have sufficient capital to pay for what they wanted, they could never have many styles to show to consumers here. The consequence was lack of sales and subsequent failure.

If American manufacturers would, after sending some one over to study the needs of this country, intrust some reliable man understanding the trade with show and stock rooms here, I have no doubt but that the American vehicle, if built somewhat after the Dutch pattern, would eventually find a market; but the sending of catalogues to dealers, as has thus far been done, will not effect any sales, and no merchant will import a variety of styles of American vehicles if he has to pay for the same on delivery.

If a large stock room were established in the Netherlands, at The Hague or Rotterdam, local carriage dealers could from there be supplied with American vehicles for their showrooms, and I have no doubt that such an arrangement would give satisfactory results to the American manufacturer and exporter.

In this country all the manufacturers subscribe to a Paris monthly, edited by Louis Dupont, 78 Rue Boussiere, who with each number issues pictures of carriages which are copied by Dutch manufacturers.

S. LISTOE, *Consul.*

ROTTERDAM, *June 26, 1900.*

PORTUGAL.

VEHICLE INDUSTRY.

In no part of this country is the manufacture of vehicles an industry of importance, and Lisbon is the only town where it is carried on to any extent.

The principal firm in Lisbon engaged in carriage building estimates that not more than 40 carriages of all descriptions are produced in Portugai per annum, victorias predominating, the remainder being landaus and coupés.

WAGES.

The earnings of employees in carriage building are as follows, per diem: Smiths, skilled, 2 milreis[1] ($1.48); carpenters, coach bodies, 1.8 milreis ($1.33); upholsterers, skilled, 1.6 milreis ($1.18); laborers, lowest wage, one-half milreis, (37 cents).

VEHICLES IN DEMAND.

Outside of Lisbon, carts and wagons are drawn by oxen, and the vehicles are of the rudest and most primitive character—the wheels, for instance, with one crossbar instead of spokes, and revolving axles.

MANUFACTURERS.

The following are the principal manufacturers of vehicles in Lisbon: Almeida Navarro, 256 Rua da Palma; A. C. Costa & Co., 27 Rua das Parreiras; Ant. Joag. Dunas da Silva, Rua da Rosa; Fernando Augusto Pereira & Tomãos, No. 8 Rua do Marquez Sá da Bandeira.

The duty on all vehicles is extremely high.

AUTOMOBILES.

I understand there are only two small automobiles in Portugal, and these are of French make.

As the towns of Lisbon and Oporto are very hilly, neither automobiles nor bicycles are likely to be very much in demand.

J. H. THIERIOT, *Consul.*

LISBON, *June 27, 1900.*

RUSSIA.

VEHICLE INDUSTRY.

There are no official statistics, past or present, to be had relating to this industry. I am indebted to the firm of Theodore Meise for the following facts concerning the trade in St. Petersburg, where between 1,500 and 2,000 vehicles of various styles are manufactured annually, largely "droschkies"—the Russian cab—small, heavy victorias, landaus, and coupés. A capital of $3,000,000 is employed, and the greater part of the work is done by hand. The raw material, principally hickory, as well as the varnish, is imported from the United States. The annual product, including repairs, amounts to $2,000,000.

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[1] The consul estimates the milreis at 74 cents.

MANUFACTURERS.

The principal manufacturers are: J. J. Braeutigam, Zaharievskaia, 8; P. D. Jacovleff, Nadejdinskaia, 1–96; T. Meise, Basseinaia, 14; Fraese & Co., Ertelev, 10; J. B. Schober, Sergievskaia, 43; C. J. Krummel, Kovenski, 5; P. Paliatchek, Nevski, 106.

About 1,500 workmen are employed by the foregoing.

WAGES.

The following is the scale of wages paid skilled workmen per month:

Upholsterers	$20.00
Leather workers	17.50
Painters	$20.00 to 25.00
Blacksmiths	35.00
Woodworkers	30.00 to 35.00
Spring makers	25.00
Laborers	7.00 to 10.00

OUTLOOK FOR AMERICAN GOODS.

The tariff is almost prohibitory, and as a consequence there is very little trade in foreign vehicles. A few sulkies and trotting wagons are imported, and those from the United States are preferred. It is claimed that American carriages are too light to stand the rough roads found in Russia.

AUTOMOBILES.

Automobile tricycles are manufactured by the Anonymous Velocipede Company, of St. Petersburg, and are beginning to attract attention, but it is conceded that the roads in Russia are too rough to warrant their general use in the near future.

The Russian minister of war is anxious to secure a motor that will draw army wagons, to be run by petroleum or storage battery.

W. R. Holloway,
Consul-General.

St. Petersburg, *April 21, 1900.*

CARRIAGE AND WAGON WHEELS IN RUSSIA.[1]

In reply to Department instructions, I submit the following tabular statement showing the imports into Russia in 1895 and 1896 of carriages, carts, and detached pieces thereof, together with the duties to which they are subjected under the Russian tariff:

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[1] Republished from Consular Reports for May, 1898, No. 212.

Description.	1896.		1895.		From Jan. 1 to May 1, 1897.		Rate of duty.
	Pieces.	Value.	Pieces.	Value.	Pieces.	Value.	
Carriages:	*No.*		*No.*		*No.*		
Large, such as coaches, calashes for four persons, landaus, diligences, and omnibuses.	55	$25,186	44	$16,962	10	$4,112	$101.90 each.
Light, such as calashes for two persons, phaetons, droskies, cabriolets, cabs, etc.	130	30,326	108	21,588	186	6,168	$69.48 each.
Vans and carts	22	2,570	34	3,598	42	8,738	$30.88 each.
Carts, common, for farmers, and other similar carts for conveyance of freight or passengers.	98	2,056	....	....	10	514	$9.26 each.
Total	300	60,138	186	42,148	248	19,532	
	Tons.		*Tons.*		*Tons.*		
Detached parts of carriages, such as bodies, wheels, lamps, etc., with the exception of springs, axles, and other accessories.	54	69,904	72¼	79,156	52	38,036	[1] $6.17 per pood.

[1] 1 pood = 36.112 pounds.

NOTE.—Carriages upholstered, completely finished, pay 20 per cent in addition to the duties stated.

Carriages of all sorts, heavy and light, are imported chiefly from Germany and Austria-Hungary, while vans and carts, as given in the table, are imported from Austria, Germany, Great Britain, and Holland. Detached parts of carriages (wheels, bodies, lamps, etc.) come from Germany and England.

Hickory wood, which is used in this country for wheels, comes from the United States indirectly, through firms in Germany and England.

The principal firms using carriage and wagon material in St. Petersburg are: M. F. Beyer, Nevski, No. 8; I. Brautigam, Zaharievskaia, No. 8; Th. Wainoff, Liteinaia, No. 15; E. Wienel, Peski, Fourth street, No. 42; Th. Hartley, Zastavskaia, No. 5; T. Meise, Basseinaia, No. 14; I. Chaubert, Serguievskaia, No. 43; P. Jakovlev, Nevski, No. 96.

JOHN KAREL,
Consul-General.

ST. PETERSBURG, *September 16, 1897.*

SPAIN.

VEHICLE INDUSTRY.

After careful investigation, I find that this industry is almost confined to Madrid and Barcelona. In these chief cities of Spain the leading manufacturers have established their works, although in every town and village there may be found one or more small workshops capable of turning out a vehicle for local use.

There are in Barcelona five or six large vehicle manufactories, with a capital of about $200,000 and employing, together with the smaller shops, about 500 workmen. These large firms make on an average about 30 vehicles each per annum, the largest turning out as many as 50.

Madrid, from the fact of its being the capital and the residence of a larger proportion of wealthy people, gives more scope to this industry, and some $300,000 are said to be there invested in it.

It was only about fifty years ago that the manufacture of carriages was properly established in this country, but it has steadily grown in importance until it is now able to supply most of the vehicles required. The axles and other fittings are, however, all imported from England and France. I find that French and English journals connected with this industry are received by the manufacturers here, and most of the carriages made are built according to plans and drawings published in such periodicals. In conversation with some of the leading carriage builders here, I was informed that a few American carts were brought over some time back, but were found too lightly built for the rough roads and pavements of this city.

It appears to me that it would be well for some of our home journals to be circulated among the Spanish manufacturers. Illustrated advertisements of tools and fittings related to the industry might with great advantage be brought to their notice.

WAGES.

Of skilled employees there are not many. Their earnings average about $1.50 per day of ten hours work. Ordinary employees earn from 40 cents to 90 cents per day.

MANUFACTURERS.

I subjoin a list of the carriage manufacturers of Barcelona, those marked with an * being the most important:

Julio Agost, Marqués del Duero, 6; Francisco Amat, Riera San Miguel, 58, Rafael Aranda, Luis Antuñez, 18, Gracia; *Federico Badal, Consejo de Ciento, 341; Juan Balagué, Paseo San Juan, 277; Baquial Batlle y Forn, Lope de Vega, San Martin; Jaime Barceló, Comercio, 14; *Betlla Hermanos, Caspe, 66; Antonio Binefa, Travesera, 143, Gracia; Canas y Riera, Freixuras, 4; Juan Capel, Ribas, 13; Francisco Capella, Consejo Ciento, 263; Tirso Capuz, Aragón, 290; Compañia de Tranvias de Barcelona á Sans, Carretera, 99, Sans; José Estrada, San Vicente, 8; José Farré, Ronda San Antonio, 54; Francisco Figueras, Carretera de Mataró, 250, San Martin; *Forcada y Compañia Gerona, 154; Gatell Gatell, Casanovas, 6; Jerónimo Gausach, Vergara, 18; Jaime Jornet, Sagrera, 127, San Martin; Esteban Labrandero, Vilá y Vilá, 123; J. Marqués é hijo, Berenguer el Viejo, 10; Antonio Meler, Comercio, 42; Fayos Miralles, Avellana, 3; Juan

Molist, Aribau, 13, Gracia; Juan Nadal, Guardia, 15; Francisco Niella, Carretera Mataró, 262, San Martin; Francisco Paret, Mayor, 110; Antonio Pedros, Torrente Olla, 156, Gracia; Rafael Pich Mansó, 39; José Quinto, Plaza Cementario, 4, San Martin; * Juan Reynés, Consejo Ciento, 463; Francisco Riera, Sepúlveda, 168; Vicente Sorrivas, Aragón, 439.

AUTOMOBILES.

The automobile may be said to have been introduced only within the past two years. The firm of E. de la Cuadra, floated as a share company with ample means, has been formed to push the sale in Spain. This is, however, believed to be connected with a German firm of manufacturers. No automobiles are made in Spain as yet, but I am of the opinion that they are likely to be popular. I should further surmise from the jealousy with which I was refused all information regarding the development of the importation of automobiles into Spain, that their sale is increasing.

JULIUS G. LAY, *Consul-General.*

BARCELONA, *April 19, 1900.*

CARRIAGE AND WAGON WHEELS IN SPAIN.[1]

Owing to the fact that no satisfactory returns of the imports into Spain are published, it is very difficult to give statistics that would prove of any real value to exporters to this country. According to the official Madrid Gazette, there were imported during 1896:

Description.	Quantity.	Value.
	Tons.	
Tires for carriage and wagon wheels	550	$21,483
Wheels, without tires	37	2,344
Axletrees	45	1,764
Wrought-iron hoops and wheels, weighing 220½ pounds and over	3,467	14,506
Wrought-iron wheels, weighing under 220½ pounds	211	2,718
Total	4,310	42,815

In order to obtain more definite information, I called on the leading carriage and wagon builders in Spain—the Sociedad Material para ferrocarriles y construcciones—who furnished me with the following particulars:

> During 1896 we built only 23 carriages; this year we have orders for 700 carriages and wagons, so that one year's statistics are no guide to what our imports from abroad are. Wheels are imported from Germany and Belgium; but, with the exception of

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[1] Republished from Consular Reports for May, 1898, No. 212.

the springs, buffers and couplings, and grease boxes, all the accessories required in carriage building are now made in Spain. In 1896 we imported—

From Germany, 40 sets of wheels	$1,400.00
From Belgium:	
28 sets of wheels	1,340.80
168 bearing springs	345.80
160 bearing-spring brackets	208.00
80 guard plates	108.00
72 guide fasteners	25.10
40 buffers and couplings	416.00
140 spiral springs	50.00
80 safety chains	68.00
112 grease boxes	521.40
From France, 1 vacuum brake	100.00

This year, of course, our imports of wheels will be much larger; but, owing to the high rate of exchange on foreign countries, we are obtaining almost all our other supplies at home.

The railroad companies in Spain also import large quantities of wheels for their own shops, chiefly from Germany, on account of their cheaper cost as compared with those made in Great Britain.

This meager information is all I have been able to collect on the subject.

H. HENDERSON RIDER,
Vice and Deputy Consul-General.

BARCELONA, *September 22, 1897.*

SWEDEN.

VEHICLE INDUSTRY.

The manufacture of wagons and vehicles has not achieved any prominent place in Sweden. A large factory does not exist, and all work may be called hand work. The wagons in use are strong, with small wheels, and, as a rule, the load is drawn by the shaft. Where a team is employed, a pair of shafts are used.

The latest statistics show only 753 men engaged in the vehicle industry, and out of this number 340 are also employers. In this total 274 are engaged in the cities, 13 in the villages, and 466 in the country. There are many large entailed estates in Sweden that are managed according to the customs prevalent a century ago. On all these holdings there is a wagon smith, and during the year round he turns out and keeps in repair the vehicles that are required and that need mending.

An idea of the smallness of the industry in Sweden may be obtained from the report of the assessor, who returns the taxable property in the Kingdom employed in the vehicle industry at only $35,000. I may say that Stockholm turns out the best goods.

The wages paid range from 75 cents to $1 per day of ten hours' labor.

Sweden imports very little in the way of vehicles. The total value for last year was only about $30,000. Denmark supplies one-half the import and the remainder comes from Germany and England.

The exports are insignificant.

AUTOMOBILES.

The manufacture of automobiles has not begun, and I do not believe there are more than fifteen in the Kingdom. As soon as a cheap and practical machine comes on the market, they will be popular. There is no American competition to speak of.

EDWARD D. WINSLOW,
Consul-General.

STOCKHOLM, *March 24, 1900.*

CARRIAGE AND WAGON WHEELS IN SWEDEN.[1]

The value of carriage and wagon material imported into this Kingdom for the last fiscal year amounted to $19,173, of which about one-half comes from Denmark and the balance equally from Germany and England.

The wheel most needed must have heavy spokes, with strong hubs. The roads are good, but the country is hilly, and consequently the carriage wheel must have all the elements of strength and yet not be clumsy. In the cities cobblestones constitute the majority of the pavements, and heavy tires are used to keep the wood secure. The iron hub used extensively in the United States I have not seen here.

The conveyances used in the hilly districts are small, and the diameter of wheels correspond. The United States does not seem to be represented in this trade, and samples of the work of American manufacturers would have to be placed with merchants here in order to test the prospect of making sales.

EDWARD D. WINSLOW,
Consul.

STOCKHOLM, *October 5, 1897.*

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[1] Republished from Consular Reports for May, 1898, No. 212.

SWITZERLAND.

VEHICLE INDUSTRY.

The vehicle manufacturing industry of Switzerland is not of much importance. It is a question whether there were many more wagons of all sorts manufactured in this country during 1899 than were manufactured in 1879. The street car, the railway, the bicycle, and the automobile have made the slower systems of transportation and locomotion unpopular, and to a considerable extent unnecessary. At the beginning of the nineteenth century the awkward French stagecoach, the clumsy farm wagon, the heavy dray cart, and now and then a private coach of the French pattern, were the only vehicles ever seen in Switzerland. The back of the horse, the ox, the cow, and the peasant accomplished the principal part of the local transportation of produce and wares of different kinds. This condition of things was not very much improved up to the middle of the nineteenth century. After that the modern improvements in transportation began to be felt, and while this has resulted in giving to Switzerland more miles of railroad, according to area, than any other country, it can not be said that the vehicle industry has advanced in any very marked degree.

For instance, there are, as Consul Ridgely states in his report, only ten manufacturers of vehicles in Geneva, and all of them together do not produce more than 50 vehicles a year. As will be seen from the report of Consul Gifford, Basel is the most important vehicle manufacturing center of Switzerland. About 250 coupes, landaus, victorias, and dogcarts are constructed in that neighborhood every year, and in their manufacture some American hickory is used. American hickory made its mark at the Paris Exposition in 1878. At that time there was a fine display of this excellent wheel material, and all wood workers and wagon builders who saw it were very much interested in its strength and solid qualities, and from that time there has been a lively demand for hickory. The only difficulty standing in the way of its importation in large quantities is the cost.

AUTOMOBILES.

The tariff is 4 francs per quintal (77.2 cents per 220.46 pounds).

There are probably not more than 200 automobiles and motor cycles now owned in this country, and these are mostly in French Switzerland, and are very largely of French manufacture, although now and then one sees the "Daimler," which is well known, and is manufactured principally in Cannstadt, Germany. There are no real automobile factories in Switzerland, as we understand the term "factory." Some are made by Martini at Wetzikon, Glotoni at Lugano, Saurer at Arbon, Egli at Zurich, and at the Velofabrik at Liestal. It is doubtful whether more than 25 automobiles have been manufactured in Switzerland, for this industry is just beginning, and it is a question whether they will ever become popular in the northern and eastern parts of the country, owing to the grades and to the sharp edges of the broken stone which are being continually placed on the public highways, and which are very injurious to the rubber tires. I have been informed that there are two American automobiles in Switzerland, but that they are of earlier make and not very attractive. Every intelligent Swiss vehicle manufacturer, if asked the question, "From what country will the successful automobile come?" would probably answer, "We are looking to the United States for the best results."

WAGES.

The capacity of the workmen is fair. They are sturdy and industrious, but can not be compared to our workmen in cleverness and ability to turn out fine work, and do it rapidly.

As to wages, Consul Gifford reports that skilled blacksmiths get about $2.50 per day, skilled painters $2, skilled saddlers $2, and common workmen in all departments from 80 cents to $1.20 per day. There may be exceptional cases where a very skillful blacksmith gets $2.50 per day and a very fine painter $2, but the blacksmith and painter of ordinary ability does not receive more than from $1.25 to $1.50 per diem for ten hours of work. Even this wage is a large increase on the wages of ten years ago, when the blacksmith received on an average only $5.40 for sixty-five hours of labor, and the painter only $3.96.

The names and addresses of the leading manufacturers will be found in the accompanying reports of Consuls Ridgely and Gifford

AMERICAN VEHICLES IN SWITZERLAND.

In conclusion I may add that at present the actual extent of the American competition in the markets of Switzerland, so far as the vehicle trade is concerned, is quite in proportion to the number of registered American commercial travelers who visited this country last year to sell goods, as compared to the number of registered German and French commercial travelers who came here during the same period. Last year Germany sent nearly 4,000, France 1,700, the United States 1.

JAMES T. DU BOIS,
Consul-General.

ST. GALL, *April 10, 1900.*

VEHICLE IMPORTS AND EXPORTS OF SWITZERLAND.

Switzerland's trade in wagons and parts of wagons, rolling chairs, automobiles, etc., in 1899.

From and to—	Quantities.	Value.	
		Francs.	United States equivalent.
IMPORTS.	*Quintals.*[1]		
Germany	486	82,620	$15,945.66
Austria	175	29,750	5,741.75
France	517	87,890	16,962.77
Italy	197	33,490	6,463.57
Great Britain	30	5,100	984.30
United States	4	680	131.24
Total	1,409	239,530	46,229.29
Total, 1898	1,304	208,640	40,267.52
Increase	105	30,890	5,961.77
EXPORTS.			
Germany	115	57,877	11,170.26
Austria	22	14,040	2,709.72
France	281	77,653	14,987.03
Italy	37	5,900	1,138.70
Belgium	2	3,000	38.60
Danube principalities	....	200	....
Total	458	158,670	30,623.31
Total, 1898	401	88,564	17,092.85
Increase	57	70,106	13,530.46

[1] Quintal = 220.46 pounds.

ADOLPH L. FRANKENTHAL,
Consul.

BERNE, *April 6, 1900.*

BASLE.

VEHICLE INDUSTRY.

Since 1850, the local carriage industry has undergone a complete transformation, or rather it has been created. Up to forty years ago nearly everything except the peasants' carts were imported, generally from France. Finally one Kaufmann, a Frenchman, established himself in the neighboring Alsacian village of St. Louis and began to manufacture vehicles for the Swiss market, especially devoting his attention to fine private carriages of all kinds. After the annexation of Alsace to Germany he removed to Basle, where he continued and enlarged his business.

VEHICLES MANUFACTURED.

There are no statistics in regard to the number of vehicles manufactured in this part of Switzerland, but a well-informed gentleman connected with the business estimates that about 250 fine carriages are turned out yearly in this city alone.

These carriages—coupés, landaus, victorias, dogcarts—are thought to be as well and elegantly made as the finest products of the French industry, and accordingly there are now perhaps less than half a dozen imported vehicles in Basle. The exceptionally high tariff, amounting to 20 francs ($3.86) per centner (220.46 pounds) weight on vehicles used for the transportation of persons, and 6 francs ($1.16) per centner on other carts and carriages, when added to the freight charges, increases the price too much, unless some decided advantage is to be obtained from purchasing abroad.

The fine private carriages of the regulation styles are built here by two principal houses, that manufacture not only for the local market but for other parts of the country, and to some extent for the neighboring German territory.

The owners of livery stables in this city have the concession for the cab service also. They buy many of their better vehicles at second hand from the owners of private equipages, while they make the greater number of the common hackney coaches in their own repair shops.

Farm and milk wagons, which still constitute the most important part of the industry in Switzerland, are manufactured by a large number of small establishments scattered everywhere over the country. There are no extensive factories on the American plan producing articles of a standard type in large numbers, so that missing or defective parts can not at once be supplied in any desired quantity.

In recent years, the type of the milk wagon which formerly had so great an importance in this country has undergone a change. It is now a four-wheeled vehicle, that may be changed at will into a cart for the transportation of other products, or, with the addition of a second seat, into a pleasure wagon. Milk is still brought to market in these carts, but since narrow-gauge and electric roads penetrate the country in all directions, a great deal of it is brought to cities and towns every night and morning by rail. The formation and wonderful success of the so-called "Consumvereins," or cooperative societies for the purchase and distribution of provisions, has also contributed much to limit the peddling out of milk and farm products by individual farmers, and consequently to reduce the demand for milk carts.

CAPITAL INVESTED.

The capital invested in the vehicle business in this city is estimated at about 1,000,000 francs ($193,000).

WAGES.

The following are the average wages of the principal employees and workingmen in the carriage shops of this city, per day:

	Francs.	United States equivalent.
Skilled blacksmiths	14	$2.70
Skilled painters	10	1.93
Skilled saddlers	10	1.93
Common workmen in all departments	4-6	.77-1.116

MANUFACTURERS.

The names and addresses of leading manufacturers are as follows, all of Basle: D. Dischler, 9 Baumleingasse; R. Finiger-Krug, 16 Holbeinstrasse; Charles Heimburger, 24–26 Spitalstrasse; Imhoff-Schetty, 3 Rappoltshof; Reinbolt & Christie, 59 Elsässerstrasse; Spleis-Hohler, 7 Maltgasse.

Only two of these houses are of more than local importance, namely, Reinbolt & Christie, reputed to be the most extensive carriage manufactory in Switzerland, and Charles Heimburger, who holds, perhaps, the third rank, Griesberger, of Zurich, being second in importance.

EMPLOYMENT OF AMERICAN WOOD.

An interesting experiment, begun a few years ago by Basle manufacturers, is the employment of American hickory for carriage wheels. The trial was recommended by a Swiss who had lived many years in the United States. Although it is affirmed that the native acacia is equally valuable for this purpose, the fact that the importation and use of the American wood continue seems to be a proof of the contrary.

AUTOMOBILES.

It may be said that up to this time no automobiles have been manufactured in this district; but the corporation named the "Velofabrik Diestal," of Diestal, the principal town of the Canton of Baselland, is just now on the point of placing such a vehicle on the market. It is not understood that the new machine possesses any very novel features; and it is impossible to say whether it will obtain more favor with the public than the French and German articles that occupy the field at present. Of these latter, manufactured by Benz, of Mannheim, and by Pagrot in France, not more than half a dozen seem to be in use by private persons in this consular district. These may possibly give satisfaction to their owners, but it is certain that they possess no attraction for the public in general. So that it may be predicted with confidence that until an automobile has been invented which has considerable advantages over those now introduced, in respect to lightness, elegance, and especially odor, there will never be a great demand for such vehicles in this region.

The field then is quite clear for the American machine that shall fulfill the above conditions. There is no prejudice to overcome such as exists in regard to American vehicles in general, on account of their alleged lack of strength and stability. On the contrary, it seems to be confidently expected that America will solve the problem and furnish Europe with the automobile, as it has already furnished it with the most successful bicycles. The watchword with amateurs at present is, "Wait till America sends us a successful electric motor."

This confidence in what our countrymen can and will do in the way of mechanical invention is born of long experience and has often been signally justified; but it is nevertheless an interesting phenomenon just at this time, when the commercial policy and political action of the United States do not enjoy the advantage of always exciting enthusiasm "in foreign parts."

GEORGE GIFFORD.

BASLE, *April 5, 1900.*

BERNE.

VEHICLE INDUSTRY.

The vehicle trade of this consular district is insignificant. There are no regular factories as we understand that word, and every village blacksmith is also a wheelwright, who can build and repair the clumsily constructed vehicles that are used in his locality. In the larger cities of this district, dealers in saddlery articles also handle wagons. The so-called manufacturing consists of assembling and putting together the different parts which are imported in the rough, mostly from France, Germany, and Italy. The finishing, painting, and upholstering are done here.

Statistics show that the whole import of vehicles and parts is below $50,000, and the export figures contain again the parts imported rough, but finished and reexported across the boundaries to the near-by countries. I can not tell the total number of vehicles manufactured, but the styles could be divided into three classes, namely, pleasure carriages, common wagons, and country wagons.

SWISS V. AMERICAN VEHICLES.

There are but few good pleasure carriages and these are mostly of the French or German type, with small front wheels, heavy fancy iron works, curved bodies, generally hanging low, and the front wheels placed in front of the body and not under it. The wheels are heavy, with 2½-inch iron tires.

The attempt has been made to introduce American buggies, but without results. One dealer said to me, "Your wagons look as if a wind would blow them over. They are not heavy enough for our taste, and as for a side bar, I would not risk riding in one. You need too much room for turning round and the wagons are dangerous, for you are liable to get tipped out."

SWISS HORSE DRIVING.

I succeeded in finding out the reason why a side-bar wagon could not be used. The peculiarity of the Swiss in driving horses is that they appear not to know the ability of a horse to back as well as to draw. The harness here is without breeching, and consequently a brake is necessary, and every vehicle is supplied with one. The crank of this brake looks like the handle of a coffee mill and is put in the most inaccessible places, generally between the legs of the driver near the bottom of the seat or low down on the outside of the place where the driver puts his feet. Every time the slightest incline is descended this crank is wound up, and it is a comical sight to see the driver bending down, winding up the brake crank with one hand and with the other trying to prevent the horse from going any faster, all the while looking like a man who was afraid of a horse and seeking something in the bottom of the wagon to throw at it without ever being able to find it. The screw rod of the brake extends downward through the body and ends in an iron shoe, acting against the tire of the hind wheel.

COMMON WAGONS.

Under the second heading of common wagons would come every class of vehicle used for transportation. One sentence would describe them. The heavier and clumsier they are made the better they are liked. I shall try and give a description of a dump cart: Four heavy wheels; hubs 6 and tires 4 inches across; front wheels two-thirds size of hind wheels; immense heavy front and back rockers of wood, but not protected with iron plates; across these two parallel beams 12 feet long and from 6 to 8 inches in diameter, sometimes being tree trunks rudely planed off, and in the center and firmly bolted down, a box with movable sides with a capacity of 1 cubic meter (35.316 cubic feet). There is also a wagon tongue that could serve as the mast of a small yacht, heavily ironed, and a brake of wood, large, heavy, and clumsy, which acts on the front wheels, the crank which operates it being located directly in front of one of the wheels. Two horses are required to pull this apparatus, and the location of the brake crank causes many accidents, for the driver, when he wants to wind it up, has to get down and do so while walking backward. It is easy thus to stumble and fall under the wheels. This is also the plan of most of the common wagons, with perhaps a few alterations and variations.

The country or farm wagons are anything and everything capable of running on wheels, but not one of them would be complete, or rather incomplete, without the inevitable brake.

The industry amounts to so little that it is impossible to procure statistics regarding the capital employed, nor can I give the earnings of the employees. There are no leading manufacturers of carriages here.

AUTOMOBILES.

There are a few agents for French automobiles in my district, but the sale is limited. In Berne and vicinity there are four or five gasoline machines.

ADOLPH L. FRANKENTHAL,
Consul.

BERNE, *April 6, 1900.*

GENEVA.

VEHICLE INDUSTRY.

Vehicles are manufactured in this district on a very small scale and although there has been a decided increase in population since January, 1850, there are fewer vehicles manufactured in French Switzerland than at that epoch. This is due to the fact that railways, street cars, steam and electric tramways, bicycles, and automobiles have steadily grown in use and popularity.

There are 10 manufacturers of vehicles in the large city of Geneva, and all of them together do not manufacture more than 50 vehicles a year. Very little capital is invested and few vehicles are kept in stock. The manufacturers generally make to order upon designs furnished by their clients. An order to construct a fine landau or coupé in Geneva would be regarded by the most prosperous manufacturer with respect and awe. Yet, none the less, Monsieur A. Oertig, a manufacturer at No. 40 Rue du Môle, has just turned out at his shop both a coupé and landau which he is sending to be displayed at the Paris Exposition. The coupé is a very fine and graceful vehicle, with rubber tires, and has an electric battery under the coachman's seat which furnishes lights for its two fine lamps. These lights may be turned on by the coachman himself or by the occupant of the coupé. The manufacturer told me that he had never seen a vehicle thus equipped in Europe and appeared to look upon me with suspicion when I informed him that electric lights for carriages would not be regarded as a novelty in the United States. The price fixed for this fine exposition coupé is $1,200. The price of an ordinary Geneva-made coupé would be $600 to $900.

RUBBER TIRES.

Rubber tires are just beginning to come into use, but up to this time there are not twenty-five vehicles in the entire city equipped with them. It costs here about $100 to equip an ordinary four-wheel vehicle with rubber tires. A leading manufacturer said to me that some eight or ten years ago several American vehicles were imported and offered for sale in Geneva, but they were so badly finished and so poorly put together that the people who bought them considered themselves humbugged—they had but one merit, their lightness. This same manufacturer also said that it had become the fashion nowadays for people to keep on having their old traps done over and over until they were in the end like a popular Italian ruin—that is to say, with none of the original left. He intimated, indeed, that people were becoming quite hardened in this particular and were entirely losing their self-respect.

OPENING FOR AMERICAN VEHICLES.

If cheap American dogcarts, two-seated phaetons, and open surreys could be sent here in charge of competent agents, I have no doubt they would meet with a fair sale at tolerable prices, in spite of the pessimistic views of the manufacturer and dealer above quoted.

WAGES.

Skilled workmen are paid in the carriage shops from 10 to 15 cents an hour. It would be difficult to even estimate their capacity.

MANUFACTURERS.

The following are the leading manufacturers and dealers in Geneva and Lausanne, which are the two principal cities of this district, the more important houses being marked with an asterisk:

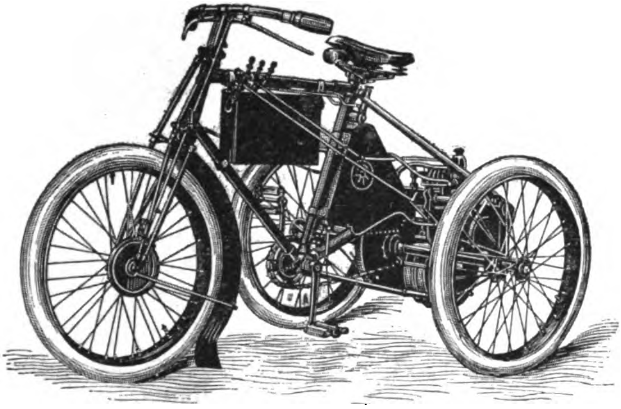
Geneva.—Jean Burkin, No. 8 Rue Rothschild; A. G. Girardin, No. 8-10 Rue Versonnax; Hirt & Mossaz, No. 588 Rue des Pierres à Niton; Aug. Hoffmann, No. 7 Rue G. Leschot; *Jaccard & Alary, No. 4 Rue Pradier; *A. Oertig, No. 40 Rue de Môle; *Vachat & Co., No. 51-55 Terrassière; D. Vasselin, No. 33 Boulevard de la Cluse; *Marc Weber fils, No. 5 Terrassière; H. Weber & Matzinger, No. 3 Chemin des Buis.

Lausanne.—W. Assal, No. 6 Maupas; J. Egli, aux Mousquines; W. Haaser, Derrière l'Ancienne Douane; Edouard Janzi, Maupas, Petit Rocher; Charles Lindenfelser, No. 14 Rue du Bugnion; J. Maurer & fils, No. 46 Rue Martheray; Jean Zaugg, 9 Caroline.

AUTOMOBILES.

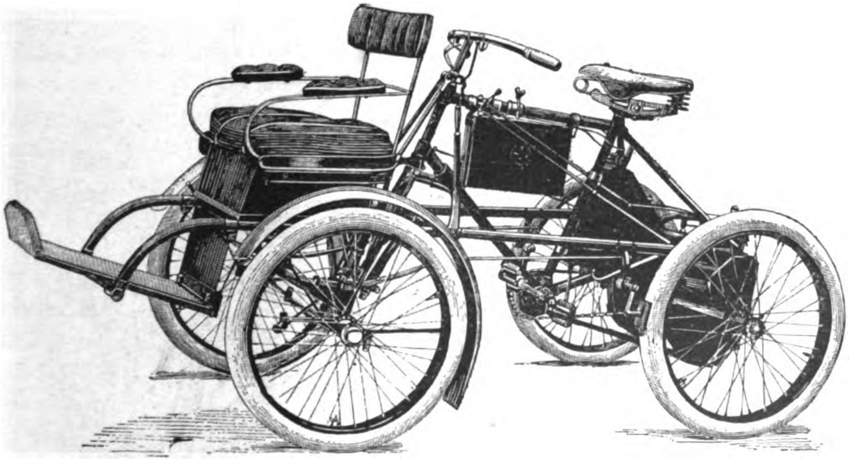
If the carriage trade is not over active, it must be admitted that this does not apply to automobiles, for in this line there is a spirited boom. No automobiles are manufactured in French Switzerland, however, although at Bienne, in the Canton of Berne, Messrs. Baehne & Co., who own the rights of the Henriod petroleum motor, have installed a plant, and are about to begin construction on a small scale. The latest unpublished statistics of the Swiss Touring Club indicate that in all Switzerland about 175 automobiles (including motorcycles) are in use at present. Of these two-thirds are in French

Switzerland, principally at Geneva. The automobiles sold here at present are almost exclusively of French manufacture, although until recently the "Daimler," manufactured by the Daimler Company, at Cannstadt, Germany, had the lead. This is still true in so far as machines above 4 horsepower are concerned, but the lighter machines are chiefly from the French manufactory of De Dion, Bouton & Co. The best selling automobiles at present are the motorcycles. This is because they are cheaper to buy and less expensive to operate. Following are the two designs most in use. They have each a force of 2¼ horsepower:



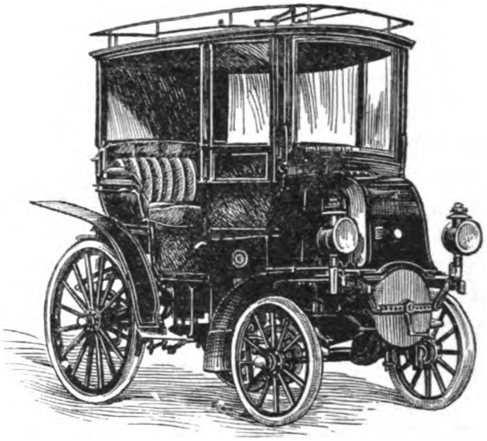
Tricycle of De Dion, Bouton & Co. Price, $320.

Either of the foregoing machines will mount a grade of from 12 to 13 per cent with occasional assistance from the pedals. They easily attain a speed of 20 miles an hour on flat roads, and burn about 5 liters of gasoline for each 100 kilometers (62½ miles).



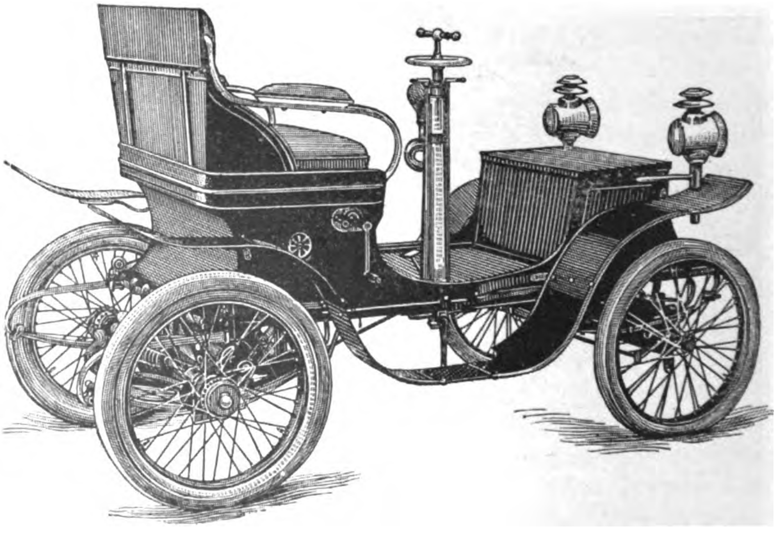
Quadricycle of De Dion, Bouton & Co. Price, $435.
(Can be transformed into a tricycle when desired.)

Following is a drawing of the popular four-seated 5-horsepower Daimler:



Voiture Daimler. Price, from $1,600 to $1,850.

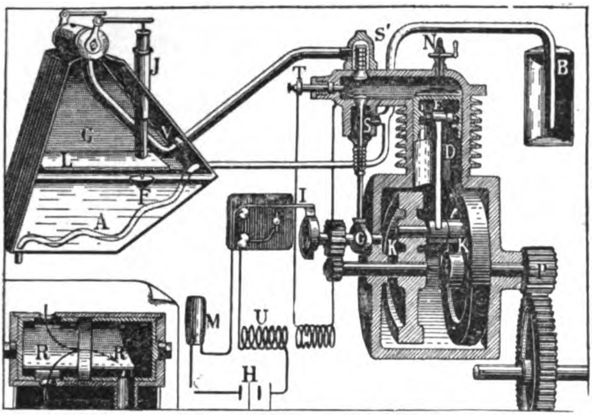
The above-described machine will easily mount a grade of 16 per cent. It has a speed of from 2 to 19 miles an hour on flat roads, and is regarded here as among the best and surest of automobiles. The Daimler motor system is too well known in the United States to require any detailed description here. The Daimler rights have been sold in France, and the famous Panhard automobile is but a French edition of this sturdy German machine. The greatest success in Geneva at present is the new three-seated 3-horsepower automobile of De Dion, Bouton & Co., of which the following is a drawing:



Three-seated 3-horsepower. Price, $868.50; with top, $920.

The foregoing automobile is really a graceful and fine little machine.

It can be run at any speed from 1 to 30 kilometers[1] an hour on flat roads, and will mount a grade of 15 per cent at a speed of from 6 to 8 miles an hour. It weighs 616 pounds and burns 8 liters of gasoline (cost, 9 cents per liter) for every 100 kilometers (62½ miles). The system is the same as that of the De Dion motor cycle, above described. Only one cylinder is used (the Daimler motor uses two) with the cold-water circulation system. The following diagram explains the motor tolerably well:



A, pipe coil for the hot gases intended to heat the essence; B, dead box for the escapement of the gases; C, carburator, where the air is mixed with hydrocarburit; D, cylinder; E, piston; F, float; G, cam acting upon the exhaust valve; H, dry battery; I, trembler for electric-lighting device; J, air-admission pipe of the carburator; K, fly wheels; L, plate of sheet metal recovering the essence; M, handle with contact device for the starting; N, compression cork; P, pinion fixed on the main driving shaft and gearing with the gear wheel of the driving-wheel axle; R, regulating cock for the air and gas mixture; R′, regulating cock for the admission of the explosive mixture into the cylinder; S, exhaust valve; S′, inlet valve; T, lighting device; U, induction coil; V, safety box.

The above-described 3-horsepower automobile is, as I have stated, the success of the moment in Geneva. Its relative cheapness, reliability, and simplicity are the combined merits which make it sell. The local agents have orders now for twenty-five of these machines, none of which can be delivered before June or July. In other words, the demand is far beyond the supply, as it also is for the "Daimler."

The "Peugeot" automobile, so popular in France, has found no great favor in Geneva, but the "Richard," a small three-seated 3-horsepower French machine, has been actively pushed by the local agent and is popular. Its price is $675.

The "Brierre," another 3-horsepower three-seated French automobile, is promised shortly for Geneva, and great things are expected of it, as it is the gasoline and cold-water circulation system of motor which De Dion has made so successful, and its reduced price of $675 is attractive.

The most important automobile agency in Geneva is that of the "Société Générale de Voitures Automobiles." This concern is the exclusive agent for the Daimler, as well as for De Dion, Bouton & Co., and has also accepted the Brierre agency. The president of the company said to me to-day: "We are anxiously looking to the Americans for something fine and cheap in the way of automobiles. We expect to see them do in automobiles what they did in bicycles. What we want in particular is an electric automobile, and we expect to see it come from the other side of the Atlantic. We stand ready to accept the agency for any reliable American electric automobile, and we can sell it fast if it is not too dear."

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[1] One kilometer=0.62 mile.

The other automobile agents of Geneva are: L. Ansermier, 6 Rue de Lausanne; Comptoir General de Voitures Automobiles, 4 Boulevard du Théâtre; E. Duckert, 14 Rue de Fribourg; Eugène Excoffier, 40 Rue du Môle; *F. Panchaud, 2 Quai Pierre-Fatio; G. Picard, 15 Rue Buttini; A. Ryniker, 61 Boulevard du Pont d'Arve; M. Sandoz, 2 Boulevard des Philosophes; M. Picker, 7 Rue du Roveray; Vassali & Grillet, 2 Rue Gevray; Marc Weber Fils, 5 Rue de la Vinaigrerie; *Bruel Frères, 10 Boulevard de Plampolais. The * indicates the more important houses.

BENJ. H. RIDGELY, *Consul.*

GENEVA, *April 5, 1900.*

ZURICH.

VEHICLE INDUSTRY.

Zurich can only boast of one firm which can really be called a manufactory in the American sense, and that firm is Geisberger & Co., Wiesenstrasse, 10. They have been established for fifty years, and sell their goods not only in Zurich, but all over Switzerland. Their annual output is 300 vehicles, and their capital invested 1,500,000 francs ($289,500). They employ, on the average, 300 men, and the wage ranges from 4 to 10 francs (77.2 cents to $1.93) per day. There are no statistics that I can find giving the total number of vehicles manufactured in this city or Canton.

The firm mentioned furnishes or makes about half of all the vehicles that are made here. As these people are slow and conservative, it is reasonable to believe that many, if not the majority, of vehicles in use in Switzerland are built to order.

There are quite a number of vehicles imported from Germany and Austria. All imaginable vehicles are built here—street cars, omnibuses, stage coaches, fine carriages, heavy and light wagons, road carts, delivery wagons for all branches of business. Efforts have been made to sell American-built wagons, but without success. Several Studebaker wagons are here now, but can not be sold—too light for these hard roads and the wheels not wide or broad enough. A strong running gear is required on these paved streets and hard roads.

In addition to the wagon firm above named there are the following firms who do a smaller business: Heinrich Eckert, Mühlebachstrasse, 12–20; H. Germann, Albisstrasse, 62; Kasper Isler, Zeltweg, 111; Jakob Ochsner, Müllerstrasse, 54–56.

The firm of Geisberger & Co. have American machinery in their factory and are satisfied with it. It is claimed that ordinary or plain vehicles can be built in the United States at less cost than here, but that high-grade and finely finished work, where skilled labor is an important item, can be done more cheaply here. There are a good many small wagon and blacksmith shops all over the city and in villages, doing repairing and building ordinary wagons to order. If our American manufacturers intend to compete in this market, they must furnish strong, well-made vehicles, with wide tires, strong brakes, etc.

AUTOMOBILES.

There are a very few automobiles in use here. The firm of Escher, Wyss & Co. has built a few, but it seems that people do not take kindly to them.

ADAM LIEBERKNECHT, *Consul.*

ZURICH, *June 23, 1900.*

CARRIAGE AND WAGON WHEELS IN SWITZERLAND.[1]

It is impossible to state the quantity and value of wagon wheels imported into Switzerland, for the reason, first, that no statistics covering importation of wheels are available, and second, that comparatively few finished wheels are imported at all. As regards the United States, hubs and spokes in the rough, the former of oak and the latter of hickory, are being imported in a small way and finished here. The houses of Geisberger & Co., Zurich & Kaufmann, at Basel, large concerns, buy American wood in the rough and manufacture all the parts themselves. These houses are equipped with American tools and wood-working machines. For fine work, as, for instance, wheels for buggies and carriages, American wood is mostly used; but for ordinary vehicles, hubs made from domestic walnut, oak, or acacia are used. I am informed that, in general, the styles, diameter, and sizes of wheels are the same as in the United States, except that in Switzerland all the parts are heavier. The smaller wheel-making concerns use both domestic and American woods, some getting the article finished in the rough and others cutting the timber themselves and manufacturing by hand. In the case of wheels manufactured in Basel, the following items may be found of use:

Size of wheels.—From 75 to 125 centimeters (29½ to 49¼ inches) in diameter.

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[1] Republished from Consular Reports for May, 1898, No. 212.

Size of hubs.—Length, 20 to 24 and 25 centimeters (7$\frac{3}{4}$ to 9$\frac{1}{2}$ and 9$\frac{3}{4}$ inches); diameter, 150, 165, and 185 millimeters (5$\frac{9}{10}$, 6$\frac{1}{2}$, and 7$\frac{1}{4}$ inches).

Size of spokes.—Thickness, 38 millimeters (1$\frac{1}{2}$ inches) at the hub and 32 millimeters (1$\frac{1}{4}$ inches) at the rim; length, 35 to 80 centimeters (13$\frac{3}{4}$ to 31$\frac{1}{2}$ inches).

Size of fellies.—Square, 43 to 52 millimeters and 40 to 55 millimeters (1$\frac{3}{16}$ to 2$\frac{1}{16}$ inches and 1$\frac{1}{16}$ to 2$\frac{3}{16}$ inches).

Material.—The principal Basel manufacturer imports from the United States, through an agent in Hamburg and another in Havre, elm hubs, mostly in a finished state, and others only perforated. He also imports spokes of acacia and fellies of hickory, both in an unfinished condition.

It does not appear that any finished carriage wheels are imported.

IRVING B. RICHMAN,
Consul-General.

ST. GALL, *September 21, 1897.*

TURKEY.

VEHICLE INDUSTRY.

The manufacture of vehicles does not figure in the industries of this country. There are a few small shops in this city, and also a few in the other seaport cities of Turkey, where common farm wagons of clumsy and primitive pattern are made, and also the common Turkish "araba," with a seat for the driver and two seats fronting each other behind him. There are many Victorias and a few landaus used in this city, Salonica, Smyrna, Beirut, Damascus, and Jerusalem; most of these are manufactured in Vienna and are clumsy but substantial vehicles.

The roads in and about Constantinople are rough, and during the rainy season in terrible condition. The ruts and stones are a severe strain upon wagons of every kind, and the average driver seems to have a genius for running into difficult and dangerous places.

OPENING FOR AMERICAN VEHICLES.

At Salonica, Smyrna, and the cities farther down the coast the streets are well paved, and there are excellent roads in the interior. Assuming that American manufacturers can compete in price, I believe that there is an excellent opening in this country for wagons of all kinds. Our American carriages are lighter and more graceful in design than anything I have seen in the Turkish markets. They ought also to be more durable, as the best material, thoroughly seasoned, is used in the manufacture of our wagons, while thoroughly seasoned wood in this country is almost unknown.

I have answered some inquiries upon this subject from the Studebaker Brothers Manufacturing Company, of South Bend, Ind., and have suggested that they confer or correspond with W. S. Bigelow & Co., 52 Broadway, New York. This firm represents the United States end of the combination of American manufacturers and exporters, who have recently opened, under my direction, an American exposition in this city. Mr. Hough, of that firm, has been here to organize and start the business, and is somewhat familiar with the general local conditions.

AUTOMOBILES.

The automobile has not yet found its way into this part of the East.

CHAS. M. DICKINSON,
Consul-General.

CONSTANTINOPLE *March 23, 1900.*

THE UNITED KINGDOM.

VEHICLE INDUSTRY.

Cabs were originally introduced into England from Paris at the beginning of the nineteenth century. In 1805, Messrs. Bradshaw and Rotch obtained licenses for a few of these vehicles. They were built to hold two persons, exclusive of the driver, and ran on two wheels, similar to the present "hansom." Owing to much opposition their number was at first very limited, but in 1832 there were sixty-five of them plying for hire in London. The cab introduced from Paris gradually displaced the older hackney coach, but was itself succeeded by a cab of a larger style, brougham type, from which the present "four wheeler" now in use was designed.

The hansom patent safety cab, invented by a Birmingham architect, was introduced in 1834, and marked a new era in street locomotion. Since that time many advances have been made in the hansom, and to-day it is the principal vehicle in use in London streets for rapid transit. In 1898 the number of licensed public carriages in London was as follows:

Hansoms	7,899
Clarences	3,648
Omnibuses	3,423
Tram cars	1,295
Total	16.265

In the same year there were licensed:

Hackney drivers	13,475
Stage drivers	7,498
Conductors	8,753
Total	29,726

Carriage, a term applied to any vehicle for general use in conveying passengers, is a structure of which there is a multitude of shapes and designs, to wit, road carriages, having two or four wheels, such as the gig, the Tilbury, dogcart, T-cart, Irish car, and hansom cab, all these being built with two wheels. They require very strong and rigid shafts in consequence of the weight having to be divided between the horse's back and the wheels of the vehicle. In four-wheeled vehicles, on the other hand, the horse has no weight to bear, having only to drag. Open four-wheel carriages are the phaëton, wagonette, and the brake and char-a-banc. Other four-wheel vehicles are the omnibus, coach, brougham, landau, and drag.

The manufacture of carriages and omnibuses ranks, it is said, in the highest class of skilled labor. The best materials and workmanship are needed, as, in view of the hard wear to which the vehicles are subjected, cheap and light building would be ruinous. From an authoritative source I quote the following:

> Many kinds of wood are employed in the construction. The body of the carriage is made by one set of workmen, the under framing by another, the former partaking more than the latter of the nature of cabinetwork. The steel spring making is delicate work, owing to the necessity for combining strength with lightness and elasticity. * * * The covering of the upper part of the body of a carriage with leather is one of the most difficult parts of the manufacture; one single hide is employed, the leather being worked round the corners by repeated currying while wet. * * * The best coaches receive as many as twenty to thirty coats of oil paint, and the polishing processes are numerous and carefully conducted.

Carts used for the conveyance of merchandise and goods, as distinguished from passengers, are usually two-wheeled vehicles, four-wheeled being termed, generally, wagons. All carts in Great Britain are required under the law to bear the name and address of their owner.

Railway carriages.—In the United Kingdom there were in 1891 37,000 carriages used on the railways for the conveyance of passengers and 526,000 wagons for goods traffic, drawn by something over 16,000 locomotives. The cost of a passenger express locomotive is between £2,500 to £3,500 ($12,166 to $17,033), while more powerful engines cost anywhere from £4,000 to £5,000 ($19,466 to $24,333). Both engines and carriages are usually made by the railway companies themselves. A first-class carriage costs from £600 to £700 ($2,920 to $3,406) to build, a second class £450 to £600 ($2,190 to $2,920), and a third-class £300 to £450 ($1,460 to $2,190). A coal wagon capable of carrying 8 tons costs £70 ($341), and a 10-ton wagon £70 to £90 ($341 to $438).

MANUFACTURERS.

There is not within this consular district any particular locality where the manufacture of vehicles may be said to be the staple industry. There are in the London district alone over 220 coach builders, over 15 cab builders, 65 wagon builders, over 250 cab proprietors, several of whom make their own vehicles—not only cabs but carriages of all sorts—and over 150 job masters who let out cabs and carriages, either for a specific journey or by the hour or day, or who contract to let out a cab or carriage for any purpose, according to arrangement. As before stated, the number of licensed public carriages in 1898 was 16,265 vehicles in London alone.

The number manufactured per annum, however, it is not possible to state, or indeed to estimate with any degree of accuracy, as it is evident that in a city of over 6,000,000 inhabitants the number of private vehicles must necessarily be very large. The general styles of private vehicles include the brougham, landau, gig, dogcart, barouche, wagonette, coach, and private cab.

CAPITAL INVESTED.

The capital represented by the vehicle industry must be enormous, even if the term "vehicle" be applied solely to cabs, carriages, and the "mercantile" wagons. But as the firms engaged in the business are not, as a rule, joint stock concerns, there is no available means of discovering, even approximately, the amount of such capital.

WAGES.

As regards the capacity and earnings of employees, I am informed by Messrs. Thomas Tilling, Limited, a large company of omnibus and cab proprietors and builders, having offices and branches around London, that—

> A journeyman coach builder here earns, on an average, about £2 ($9.73) per week, but a foreman who does piecework—that is to say, pays the men himself and makes a fixed charge for the work—will earn as much as £8 ($38.93) per week.

They add:

> We do not manufacture a great many carriages ourselves, and what we do make are principally landaus, broughams, and victorias, which altogether, including omnibuses, number 1,600. Our net increase for the past year was about 200.

From the London General Omnibus Company, Limited, I have received the following details:

> This company turns out on an average 140 new ordinary garden-seat omnibuses per year; * * * also repairs and renovates about 1,450 omnibuses and maintains the same in working order; * * * also builds provender, manure, and other service vans and vehicles used in the company's business. The following are employed on the work:

Occupation.	Wages.	
	English currency.	United States equivalent.
	£. s. d. £. s. d.	
Coach builders.....per hour..	0 0 7½-0 0 8½	$0.15-$0.17
Smiths.....do....	0 0 7 -0 0 9	.14- .18
Smiths' mates.....do....	0 0 5½-0 0 6	.11- .12
Iron turners.....do....	0 0 8	.16
Wood machinists.....do....	0 0 8 -0 0 9	.16- .18
Viceman.....do....	0 0 7 -0 0 7½	.14- .15
Painters.....do....	0 0 5½-0 0 7	.11- .14
Ornamental writers.....per week..	2 0 0 -4 0 0	9.73-19.46
Foreman.....do....	2 12 6 -3 5 0	12.77-15.82
Clerks.....do....	1 12 0 -2 7 0	7.78-11.43
General laborers.....per hour..	0 0 5 -0 0 6	.10- .12

All the above are day workers, except the ornamental writers, who are piece workers.

MANUFACTURERS.

Among the principal manufacturers may be mentioned the following firms, all in London:

Thomas Roake, 15, 34, and 36 Iron Gate road, Paddington, whose specialty is hansom cabs; Hy. McMullen & Sons, 216 Long Acre; James Kempster, 39, 113, and 114 Long Acre; Holland & Holland, 479, 483 Oxford street; Patrick Hearne, Rodney street, Pentonville; Forder & Co., Limited, 7, 8, and 9 Upper street, Martins lane; Cook & Holdway, Halkin place, Belgrave square; A. Isaac & Co., 14 High road, Knightsbridge; Alford & Alder, 53 and 57 Newington Butts; Anglo-American Carriage and Cycle Company, 24 Middlesex street, Aldgate; C. S. Windover & Co., 20, 31, and 33 Long Acre; Henry Whittock, Limited, 10, 12, and 14 Earls Court road; Turrill & Sons, 23 Long Acre; Todd & Wright, 34 Craven road, Westbourne terrace; William Cole & Sons, 13 Young street, Kensington; Burlington Carriage Company, Limited, 315 and 317 Oxford street; Morgan & Co., 127–130 Long Acre; Bayleys, Limited, 42 Newington causeway; Bonallack & Sons, St. Georges Van Works, Cable street; Glover Brothers, 28 Cleveland place (London, W.); E. & H. Hora, Shenley Works, Peckham road, Camberwell; Webb & Sons, 42 and 44 Holland street (London, SE.); C. R. Whitmore, 279 and 281 York road, Battersea, (London, SW.); Taylor Brothers, 280 Hackney road.

It may here be pointed out that most four-wheeled vehicles are built with the front wheels "swiveled" so as to turn at right angles, thus assisting in turning the vehicle in a small space.

AMERICAN VEHICLES IN ENGLAND.

The actual extent of American competition in England, in vehicles, is but small, the reason being that the vehicles in use here are necessarily of a more rigid make and style than those in vogue in the United States. It is very seldom that an American-made vehicle is to be seen in London.

The lighter patterns and makes do not, it would seem, inspire confidence as to their strength. The vehicles here are decidedly of a heavier build and their appearance much more clumsy than is the case with American vehicles. The best method of introducing, with success, the American article would be for a large firm (or for several firms together) to send over here good representative men to thoroughly study the particular styles, patterns, and builds of the various vehicles in use, and to notify their firm or firms in the United States exactly what class of build would likely prove most popular. One point may be mentioned, and that is that many of the roads in this country are narrow and the turnings abrupt, necessitating a greater freedom for the shafts by undercutting, in order that the vehicle can safely negotiate a corner.

There would appear to be a chance for the lighter class of American vehicle, in the introduction of well-built tram cars, more especially as it is the intention, at an early date, to inaugurate electric tram-car traction in London. I append herewith an article from a recent issue of the Daily Mail. Prompt action might result in the American vehicle manufactories securing large orders for cars suitable for the proposed new departure in this particular department of rapid transit. And no effort should be missed to provide satisfactory cars, in order that the foothold once obtained should be safely held against competition.

THE DOOMED TRAM HORSE—LONDON'S COMING REVOLUTION IN STREET RAILWAYS—ELECTRIC TRACTION IN EVERY DIRECTION.

Ten years hence, in an odd corner of the new South Kensington Museum, there will be exhibited among the curiosities of bygone ages a specimen of the present London tram car.

Teachers will take their classes and show it as a proof of the little value placed on time by men of the nineteenth century. People in 1900, they will say, were content to sit in such cars an hour to get from Holborn to Hampstead. The boys of 1910, who go from Charing Cross to St. Albans in twenty minutes, will pity the slow, old fossils of to-day.

The tram car of 1900 is doomed, and before long the tram horse will have disappeared from our streets.

London is on the eve of the greatest revolution in local transit since the introduction of railways. Within the next few weeks the United Tramways Company, which owns the lines from Hammersmith to Uxbridge and Hampton, will inaugurate the most magnificent system of electric cars in Europe. Its present carriages will be sold for what they can fetch, and an array of palace cars, costing £1,000 pounds apiece, will carry the lucky Westerners with the swiftness of racehorses.

County council follows suit.—As soon as possible the London County Council, which is obtaining the ownership of all the lines in its boundaries, will follow suit. An experimental line will first be built from Westminster to Tooting, and then there will be a general transformation. Fresh lines will be run out in all directions. One will go down Farringdon street, New Bridge street, and across Blackfriars to South London. Another will come along the Embankment from Putney into the very heart of the city. A third is proposed from Piccadilly circus to Grays Inn. In every suburb the steel tentacles will reach out, gripping all London in one great system.

The ugly and dark, ill-ventilated, uncomfortable, and crawling cars of to-day are to give way to a host of palaces on wheels, furnished in princely fashion, lit like the halls of the sun, gliding swiftly through the streets with a quick, easy motion. With great plate glass windows, free from disfiguring advertisements, with brilliant lights ahead and astern, splendidly upholstered, these cars will be dreams of luxury. To travel in them will be rest and recreation.

Each tram will accommodate nearly twice as many as the present ones, and if more cars are wanted it will be easy to run them on.

Where workingmen will benefit.—The change is going to revolutionize London. Months ago the Prince of Wales, with singular prescience, declared that the one way to solve the great slum problem was to make it easy and cheap for the poor to reach the suburbs. When the workman can get from Finsbury Park to Piccadilly in twenty minutes for a penny, he will no longer box himself in a fetid city slum.

Statistics prove that out of every shilling now paid in fares the horse tram car costs about 10 pence. The electric car of the proper pattern will only cost about 6 pence. In other words, the new tram cars will yield London nearly a million a year profit.

AUTOMOBILES.

Owing in a great measure to the laws in force prior to the passing of the regulations supplementary to the "locomotives on highways act," which became law for six months from November 9, 1896, and have since remained in force, the motor-vehicle industry in Great Britain was greatly retarded, and the consequence is that to-day this country is far behind other countries in the practical adoption and use of these vehicles; and although the business is now assuming more importance year by year, it may be said to be still in its infancy. Some large firms have adopted motor wagons in place of the horse-drawn vehicles, but either because of the natural conservatism of the English character or the fear of mishaps and breakdowns, coupled with the high cost, the adoption of motor vehicles does not assume the popularity that, it is safe to say, will in a few years be extended thereto. I give a summary of the regulations now in force.

REGULATIONS FOR MOTOR CARS.

APPLICABLE TO ENGLAND AND WALES.

The following is a summary of the regulations issued by the local government board supplementary to the locomotives on highways act:

A light locomotive means a vehicle propelled by mechanical power, under 3 tons in weight unladen; only used for the purpose of drawing one vehicle, such vehicle and its locomotive together not exceeding in weight unladen 4 tons; not emitting any smoke or visible vapor, except from any temporary or accidental cause.

In calculating the weight of a vehicle unladen, the weight of any water, fuel, or accumulators used for the purpose of propulsion shall not be included.

It must be capable of being worked either forward or backward. The tire of each wheel must be smooth, with a breadth varying, according to the weight of the vehicle, from 4 inches to 2½ inches. There must be two independent brakes, each capable of preventing two wheels on the same axle from revolving. If a vehicle is drawn by the locomotive it, too, must have an efficient brake, controlled by a competent person, or else the brakes on the locomotive must be able to control the vehicle. The width of a locomotive must not exceed 6½ feet. A lamp is to be carried during the period between one hour after sunset and one hour before sunrise, exhibiting a white light forward and a red light in the reverse direction. If drawing another vehicle, it must have the name of its owner and his address conspicuously painted on it, together with its weight on the right or off side in letters white on black or black on white, not less than 1 inch in height. The weight must also be painted on every locomotive weighing unladen 1½ tons and upward.

Greatest possible speed is fixed at 12 miles an hour. If the weight be 1½ and does not exceed 2 tons, the speed shall be not more than 8 miles an hour. If the weight exceeds 2 tons, the speed shall be not more than 5 miles an hour. Whatever the weight, if used to draw any vehicle the speed shall not exceed 6 miles an hour.

This regulation has effect for six months, from November 9, 1896, and thereafter until the local government board shall direct otherwise.

General regulations.—The police are to regulate speed and stoppages for the convenience of the general traffic. A bell or other instrument shall give warning of the approach or position of the light locomotive. The ordinary rules of the road shall be observed. The name of owner shall be given whenever demanded by a constable or on the reasonable request of any other person.

A breach of any regulation may, on summary conviction, be punished by a fine not exceeding £10.

SCOTTISH REGULATIONS.

The limit of speed is fixed at 10 miles an hour if the locomotive be under 1½ tons unladen; if over this but under 2 tons, the limit is 8 miles, and from 2 tons onward the maximum is fixed at 5 miles an hour. Whatever the weight, if used to draw any vehicle the maximum speed must not exceed 6 miles an hour.

I am informed by one of the motorcar manufacturing companies that "business is increasing by leaps and bounds, and there seems every reason to believe that there will be a great future for the automobile industry. We have secured some very large orders for steam vans, omnibuses, wagons, and lorries, which we are shipping out to some of the colonies."

Another company, which does not claim to have done very much toward building complete steam cars, states that it has given its attention more particularly to improvements in the various parts required in connection with steam vehicles, and adds that it has recently sold patents therefor to the Locomobile Company of America, New York.

From a price list of certain electric vehicles recently offered for sale, it appears that the initial cost or charge ranged from £330 ($1,616), for a brake to carry 4 passengers and driver, to £375 ($1,824.94) for a Victoria.

A very interesting experiment was recently tried with motor vehicles of various grades and motive power, some being driven by electricity and others by petroleum and steam. A tour of 1,000 miles, extending from London to Bristol, thence to Birmingham, Manchester, Carlisle, Glasgow, Edinburgh, Newcastle, and return to London, was arranged, and the result was deemed very satisfactory. Many severe hill-climbing tests were included in the experiment, and in the course of the trial defects were noted, to which attention could be given with a view to, if possible, entirely eliminating such drawbacks in the manufacture of subsequent vehicles.

In my opinion, there is a good opening for the introduction of American motor vehicles, both for passenger locomotion and the carriage of goods. Both in the United States and France motor cars have been longer adopted and built than in Great Britain, with the result that the faults in construction to which the British manufacturer is now giving attention, have been in many cases either entirely overcome or lessened. In addition, the number of vehicles manufactured here is very small compared with the number turned out in the two countries named.

It is superfluous, almost, to add that many French vehicles (either French built or built here under French patent rights) are in use here, and there is no reason why the American manufacturer should not open up a good trade in England in this industry.

WM. M. OSBORNE,
Consul-General.

LONDON, *June 27, 1900.*

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SPECIAL CONSULAR REPORTS.

TRUSTS AND TRADE COMBINATIONS IN EUROPE.

VOL. XXI—PART III.

REPORTS FROM CONSULS OF THE UNITED STATES IN ANSWER TO
INSTRUCTIONS FROM THE DEPARTMENT OF STATE.

Issued from the Bureau of Foreign Commerce,
Department of State.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1900.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.[1]

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—Commercial Relations, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—Consular Reports, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—Advance Sheets, Consular Reports, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—Exports Declared for the United States, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—Special Consular Reports, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880–81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885–86 (a portion of this work was published as Consular Reports No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1897; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications, except Tariffs in Central America, etc., are exhausted, and the Department is, therefore, unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled Special Consular Reports. There are now the following Special Consular Reports:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Stave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool, and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894) —American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia. Part IV. Africa. Part V. Australasia and Polynesia. (Parts III, IV, and V not yet published.)

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries, and Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Stave Trade in Foreign Countries.

Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe. Part III. Trusts and Trade Combinations in Europe.

Of these Special Consular Reports, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly Consular Reports, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving Consular Reports regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to Consular Reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

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[1] Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

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TRUSTS AND TRADE COMBINATIONS IN EUROPE.

DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,
Washington, March 20, 1900.

To the consular officers of the United States.

GENTLEMEN: The Department desires to procure all available information with regard to the formation of so-called trusts or trade combinations in the different countries of Europe. You are therefore requested to procure such printed information and to collect from other available sources such facts as may tend to describe or illustrate the results already accomplished or the movements now in contemplation relating to this subject. Among the points of interest are the following:

First. A list of the trusts or combinations for manufacturing or commercial purposes in the country, with the corporation name, the industry engaged in, the capital employed, the dates of their organization, the value of the plants separately in the different industries, and the stock valuation of each combination.

Second. The effect of such combinations upon prices—whether of increase or diminution—upon the amount of production, the wages paid to labor, and any other results which have been so far experienced.

Your replies should be transmitted to the Department at the earliest convenient moment, and the information should be, as far as practicable, sent in duplicate.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,
Third Assistant Secretary.

AUSTRIA.

In spite of its comparatively young manufacturing industries, Austria is not behind other European countries in the matter of trusts. Though the number of trade combinations in Austria may be less, nevertheless, in point of influence on the monarchy's industries, they are every whit as important as are the German trusts in the German Empire on conditions of production and consumption. The intimate connection between Austrian production and trade combinations seems apparent from the circumstance that some few political economists do not hesitate to designate Austria, and most particularly Vienna, as the birthplace of the trusts of Central Europe, and the 9th of May, 1873, as the day of their birth.

Yet it is certain that trusts existed in Austria previous to 1873, but their number increased most markedly since that year. At least in its infancy, the Austrian system of trusts bore, more than that of any other country, the character of a protective institution. This is clearly illustrated by the first large trust formed in Austria, the steel-rail trust, which was created in consequence of the long competitive struggles among the steel-rail rolling works. In the period from 1843 to 1873, one of active railway construction in Austria-Hungary, a number of new works had gradually been established, which produced about 120,000 tons annually. But when, in 1873, the most important railway net was pretty well completed, and in consequence the demand for rails became exceedingly small, the total production dropped to from 50,000 to 60,000 tons a year. Single factories, particularly those with less capital, would have found it impossible to continue work in view of this decreased demand. By means of a combination, however, which divided the total supply needed among all the works according to certain fixed rates of percentage, and in consequence of which a rise in price was also achieved, the manufacturers escaped disaster. In so far, therefore, the Austrian steel-rail trust of 1873 might serve as a model of those trade combinations which regulate production and economically protect the manufacturer as well as the workman, without, however, oppressing the economically weaker individual, the consumer. Since that time, the year 1873, the number of Austrian trade combinations has steadily risen, embracing pretty well all articles of manufacture, the most insignificant as well as those of the highest importance, but at the same time losing one after another of the special marks of a protective union, and developing more and more into an institution aiming at the highest possible gain, and the deformities of which have finally given rise to the cry for legislation and the draught of a bill which, however, owing to parliamentary conditions, has not yet become a law. This tendency toward a policy of unlimited monopoly was the cause, as already mentioned, of the spread of Austrian trusts to all branches of trade, of commerce, and of traffic. They have become a popular and frequently employed means of economic struggle, and are growing more and more removed from their actual, theoretic, economic purpose, the regulation of production and constancy of prices. Characteristic it is that in Austria the obstacles set in the way of the formation of unions on the one hand, and of trade combinations of a general nature on the other, do not seem to exist in the matter of trusts.

The Austrian trade combinations are, in their nature, so-called trusts (Kartelle) in the actual sense of the word—that is, associations which pursue their most important end, keeping prices high and restricting overproduction—by agreement on certain points which limit free disposition, yet leave to each participant his economic independence. In this last particular they differ materially from the American trusts, in which the independence of the single manufacturer becomes lost, and all the associated factories constitute one single enterprise. In their organic composition, therefore, Austrian trusts possess no special point of interest, and only in the rarest cases signify a theoretically new symptom in the province of political economy. Further, they have, in common with most trade combinations of the world, the peculiarity of surrounding themselves with an air of mystery, which often borders on the ridiculous. Thus it is that of most trusts little more is known than their statutes, and frequently nothing learned of the inner workings until shown by practical experiences in the market. So far as these experiences are concerned, they may be thus briefly characterized: The quantity of production is, on the whole, little influenced; in most branches there is a reduction at the start of the trust's work; a rise of prices is everywhere called forth. The effect on the wages of workmen, which might bring about a lowering as a natural result, is in large measure counterbalanced by the social feature, of late years, in Austrian legislation, and the steady strengthening of Austrian labor unions; hence, the greatest sufferer is the consumer, and he is to be protected by the proposed law.

As already observed, Austrian legislation of late years is dominated by a social-political trait, and the correctness of this assertion is shown in the draft of the bill concerning trusts and rings, which the Austrian Government, but only after a long succession of propositions in the Parliament, has finally resolved to work out. The actual, immediate cause of this measure was the unparalleled success, at the cost of the public, of the sugar trust, the history of which is given in detail in a supplement to the draft of this bill. A legislative regulation of the trust system encounters all the greater obstacles, since, on the one hand, there are no codifications on this point in other countries to go by; on the other hand, again, three various judicial directions are open for state intervention—those of criminal, of civil, and of administrative law. Under Austrian criminal, law the trade combinations offer no actual case for action. The Austrian criminal laws of 1803 and of 1852 were simply limited to designating as penal transgression, agreements among manufacturers for fixing prices or wages to the detriment of the public or the laborer and the retention of wares. It is clear that such a standpoint no longer in any manner serves for the modern form of trade combinations. It would simply mean checking production in well-nigh all branches of industry were a prohibition, expressed in such a general form, to be actually put into practice. Strict penal provisions and precise specifications would be of little avail, considering the elasticity of the Austrian law governing unions, upon which all the trusts in Austria are constructed, since experience teaches that to severe penal regulations attaches a possibility of circumventing them. In view of all these circumstances, the Austrian Government could not possibly adopt a purely penal-law system, and hence one was chosen which takes into consideration all the three directions above characterized, without giving undue prominence to the penal feature, on account of the apprehended injury to production.

The draft of the bill concerning trusts has, in consequence of the parliamentary conditions of Austria, been left lying in the Reichsrath, and it is difficult to foresee just when it will be passed. In the meanwhile, Austrian trusts have developed alarmingly. The trusts have long since ceased to be a means of defense; in most cases they now are nothing but a speculation for an increase in prices. A particularly notorious instance in point is given by the steadily increasing combinations of middlemen, in respect to which all the theoretic arguments ever offered in favor of manufacturers' trusts fall to the ground. In this case, however, the consumer has to struggle against two enemies, while formerly he had but one foe to contend against. Thus, for instance, owing to the increasing number of coal trusts during the past few years, the price of coal has risen a round 30 per cent, and a new increase in price is again in prospect in consequence of a trust of coal dealers.

According to the principles on which the bill is drawn, the Government would have more the part of a censor than that of a directly interfering criminal judge in the matter of the trust system, and the claims of the producers as well as the requirements of the consumers would be duly regarded.

The text of the proposed law on trusts is appended herewith.[1]

CARL BAILEY HURST,
Consul-General.

VIENNA, *August 3, 1900.*

SUPPLEMENTAL.

The most important trusts in Austria are the iron trust, the petroleum trust, and the sugar trust.

The iron trust started with the union of the rail-rolling works in 1878. In 1881 its charter was prolonged and is of special importance, inasmuch as it became the precedent for the formation of other trusts in various branches of the iron industry. Its charter will expire in December, 1902. In 1880 the trust of the Baudagen rolling works was formed on the same basis. The union of all the iron works in Austria, the actual iron trust, therefore, was not formed until May, 1886. Its existence, having been prolonged in 1887, is assured until 1901. This trust is divided into four special classes: (1) Commercial bar and sheet iron; (2) building and car girders; (3) heavy plate iron; (4) fish plate, bolts, etc.; and only those works belong to each of these bodies which are interested in the manufacture of the respective wares.

The entire number of iron works in Austria belong to this trust. There is, further, a trust of tube-rolling mills, to which belong the Witkowitz, the Oderberg, the Schönnbrunn, the Mannesman mills in Komotam, and the Hungarian State works. The term of expiration of this trust is March 31, 1903.

The sale of the iron works thus formed into trusts for the year 1899 amounted in tons as follows.

	Tons.
Commercial iron	249,900
Building and car girders	94,600
Heavy plate iron	35,100
Fish plates, bolts, etc	18,000
Rails	86,900
Car parts (wheels, axles, tires, and springs)	20,500
Total	505,000
The direct export amounted to	26,000
The indirect export amounted to	10,800
Supplies for building of ocean vessels	11,800

The existing union of the petroleum trust was formed in 1899. It comprises 72 factories, with a total contingent of 195,503 tons. Outside of this contingent are 6 factories, with a production of 18,000 tons. There is an agreement between the crude-oil manufacturers and the petroleum refineries, according to which the former participate to the amount of half the excess of price of petroleum over $7.31 for 220 pounds, on the basis of the price of crude oil at 81 cents for 220 pounds.

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[1] Filed for reference in Bureau of Foreign Commerce.

The present sugar trust dates from the year 1897 and extends to 1901–1902, inclusive. It embraces all sugar factories and refineries in Austria. The raw-sugar factories gave up the production of sugar for home consumption, in return for which the combined sugar refineries guaranteed a minimum price of $42.63 per 220 pounds for raw sugar sold in the home market. The union has kept home prices at a fixed point for the period of this agreement, although raw sugar rose in price $1.22 per 220 pounds during this time.

CARL BAILEY HURST,
Consul-General.

VIENNA, *October 18, 1900.*

TRIESTE.

The formation of trusts has developed in Austria only during the past few years. In the last three years, these syndicates have increased in numbers to such an extent that there does not appear to be at present any really important industry in the country which has not resorted to combination; and this in spite of the fact that during this time the legality of trusts has been repeatedly and emphatically denied by the courts.

Trieste is a commercial rather than an industrial city. The few industrial establishments here do but little more than supply the local markets. There is practically no competition among them; and if one or the other is connected with a trust, the public is still ignorant of the fact. Even the journalism and literature of southern Austria have thus far paid but little attention to trade combinations.

Prague and Vienna, the industrial centers of the empire, have also been the headquarters of its trusts; and yet I doubt whether our consular officers stationed at these cities will find it an easy task to enumerate or describe all the different "combines" that have been formed in their respective districts, for in most cases information is withheld from the outside world. Not unfrequently, efforts are made to keep the trust itself a secret. Such was the case with the enameled cooking utensil trust, to be again referred to hereafter. It is evident that the promoters of these combinations realize that the best or safest trust is the one least talked about.

In each of the following industries some sort of coalition is known to exist: Sugar refining, petroleum, alcohol, iron and steel, wire and nails, hoop iron, plate glass, glassware, paper, boots and shoes, hats, and textile fabrics.

Recently, the rape-oil manufacturers entered into an agreement among themselves which is quite different from that of any previously existing combine. They are to be registered as an "open mercantile society," known under the name of "Central Selling Office of the Bohemian Rape Seed Manufacturers."

It seems probable that this latest form of combine, the name of which sufficiently indicates its proposed plan of action, has been suggested by a recent decision of the provincial tribunal at Vienna. Suit had been brought by Adolf Witsin and F. A. Lange against the aforementioned enameled cooking utensil combine and the Austrian land bank. The plaintiffs claimed that the defendants had entered into an agreement for the restriction of trade, in that the manufacturers in the combine had left it to the land bank to sell their products and to establish arbitrary prices. By the lower court, the agreement among the manufacturers themselves was declared to be illegal, but the contract between the manufacturers and the land bank, by which the bank was to act as the trust's agent for the sale of its products, was decided to be valid.

One of the leading firms in the combine retired as soon as this decision was rendered, but the other members appealed to the provincial tribunal. The plaintiffs Witsin and Lange likewise appealed, because they questioned the soundness of the second part of the sentence of the district court, by which the agreement between the manufacturers and the land bank was declared to be legal.

The provincial tribunal so far reversed the sentence of the lower court as to declare the agreement with the land bank invalid. Moreover, the bank was sentenced to pay one-third of the costs.

This decision seems to be based upon the fact that there was no doubt that the intention of the combine was to raise and maintain prices, to the public detriment. It also appeared from the wording of the agreement and from the minutes of a meeting of the contracting parties, that the land bank was fully cognizant of the circumstances under which the manufacturers combined, as well as of all the measures to be adopted for the purpose of gaining their ends. It was furthermore shown to the satisfaction of the court that the bank was empowered to establish prices arbitrarily, and that the manufacturers had bound themselves to respect its orders.

The court, considering these facts, found that the manufacturers had conjointly intrusted the bank with the sale of their goods and with the general management of their business; and it held such an agreement to be illegal.

MANAGEMENT OF TRUSTS.

To illustrate the working of industrial combines in Austria-Hungary, the brickmakers' trust of Vienna may serve as an example.

This trust is composed of fifteen firms, which have agreed to be governed by the following articles for a period of five years:

(1) The principal factory, that of the Wienerberger Brick Company, is to act as sole vendor, and as such is to be allowed a commission of 1½ per cent on the total amount of invoices.

(2) The production of brick by the various firms is so fixed that, taking as basis the 400,000,000 bricks made last year, 200,000,000 are to be produced by the Weinerberger Brick Company, and 100,000,000 by the Union Building Company. The remainder is to be divided among the other thirteen companies.

(3) The Weinerberger Company is to execute all orders of the combine.

(4) A tariff fixes the prices for each firm or factory, according to its location. These prices vary from 33.30 to 37 crowns ($6.76 to $7.51) per 1,000 bricks.

(5) The selling prices may be increased or lowered, according to the fluctuations of the market.

(6) To provide for general expenses as well as for a contingent fund for the enforcement of these regulations, a levy of 50 hellers (10 cents) per 1,000 bricks shall be made.

(7) Each firm has the right to be represented at the general meeting, and, with the exception of the Weinerberger Company, each shall have a number of votes proportional to the number of bricks it produces.

TRUSTS A NECESSARY EVIL.

There is a widespread belief among Austrian economists that trusts, whether desirable from a local point of view or not, are frequently forced upon a country by international trade conditions, and are therefore a necessary evil.

The proprietor of one of the largest scythe factories in the empire, in a recent communication to the Austrian Scythe Union, used the following argument in favor of the formation of a scythe makers' trust:

> The failure of the members of our union to come to an understanding or agreement must be considered a misfortune to the scythe industry of the country; for, while we are wasting time quarreling among ourselves, others are taking full advantage of the situation. Our foreign competitors of Westphalia (northwestern Germany) have already combined, and the South German works, the Tyrolese and Bavarian scythe makers, and the French factories are doing the same.
>
> These combines have raised their prices and threaten to do us a great deal of harm. In all probability, Germany will soon increase the import duty on hardware in general and on scythes in particular. Thus their almost prohibitive custom duties and trusts protect the German and French manufacturers and keep their home markets secure to them. Good profits being thus insured, these trusts may, at an apparent loss, force their exports into Russia and the East, and, strange as it may seem, even into Austria-Hungary.

THE RESULTS OF TRUSTS.

Trusts appear to control completely the prices of their respective products. This fact is so well recognized that the term "cooperative monopolies" is quite freely applied to all industrial combines. In nearly all instances the consumers have been compelled to pay higher prices for commodities. In some instances the increase has been remarkable. Thus, the plate-glass combine recently advanced the prices on hall-door mirrors 50 per cent. Such sudden and unjustifiable advances cause, of course, much feeling and adverse criticism among the masses.

EFFECT ON LABOR.

If it is true that, as Austrian manufacturers claim, German trusts contrive to invade Austrian markets and cripple such Austrian industries as have failed to combine, it would seem that the quantity of production and the wages paid to labor could suffer no decrease by the formation of trusts at home.

It is, however, claimed by the representatives of labor that wages have not kept pace with the general advance in prices caused by the trusts, and that their interests have, therefore, not been furthered by the spread of trade combinations.

It is, in my opinion, too early to attempt a critical review of this controversy. The most important trusts have been formed within the past twelve months, and conditions have not had sufficient time to adjust themselves. That there has been a general advance in wages during this period can not be denied, but it is difficult to determine if this advance has been proportionate to the general rise in the prices of commodities.

It is a noteworthy fact that in spite of the general improvement in the condition of labor Austria has had more strikes during the past three years than ever before. Nearly all these strikes arose from a demand for higher wages or fewer hours of work. As they occurred almost simultaneously with the inauguration of the era of trusts, I am inclined to believe that the labor movement has been intensified by this latter-day organization of capital.

FREDK. W. HOSSFELD,
Consul at Trieste.

CLERMONT, IOWA, *July 10, 1900.*

BOHEMIA.

The central offices and records of the Austrian trade combinations—whose name is legion—are mainly in Vienna and Prague, and the individual members are chary of giving details touching these organizations. Furthermore, the members are usually spread all over the Empire, retain each a separate existence and capital stock, and are not merged into one great concern with a single consolidated capitalization. These facts have made it very difficult and time-consuming to gain any satisfactory information at this consulate regarding trade combinations in Austria, and have rendered it impossible to give figures touching capital employed and value of plants.

As to associations of firms engaged in various important manufacturing and commercial lines in this country, information as follows has been obtained:

MAKERS OF IRON GOODS.

Excepting a few small concerns, every establishment of this kind in Austria-Hungary is a party to an agreement which regulates the consumption of iron. Prices are not directly touched by the agreement, but it has incidentally the effect of enhancing them.

WIRE AND WIRE NAILS.

This combination is composed of seven firms in Bohemia, controlling the trade in this kingdom. An agreement between them was effected September 2, 1889. Pursuant thereto, the entire product of all the firms is sold through a general office in Prague. The avowed object is to control prices and the quantity of goods on sale, to insure to all members equal prices for their goods, and to reduce the time of credits to a minimum.

KITCHEN UTENSILS.

The combination among producers of these articles covers not only Austria-Hungary proper, but also Bosnia, Herzegovina, Roumania, and Servia. The business is conducted through a central bureau. The purpose of the agreement is to regulate prices and to confine production within market demands. Each producer is allowed a fixed quota of the total product. One who chooses to sell direct and not through the central bureau loses his quota.

PETROLEUM.

The central office is at Lemberg, Galicia. The alleged object of the combination is to benefit both large and small dealers in unrefined oil, and also refiners, and to obstruct as much as possible the importation of refined oil. The quantity of oil placed on the market is strictly regulated.

BOTTLES.

An agreement exists among manufacturers providing for the sale of their product through a common bureau to save expense in marketing it.

SODA.

By restraining overproduction, the combination among the producers of this article prevented, it is alleged, the ruin of the firms engaged in the business and the practical extinction of the industry in Austria. The agreement was ostensibly not designed to raise prices, but purely to regulate production, though it is admitted that to restrict production tends to advance prices.

SUGAR OF LEAD.

The combination in this line is described as intended solely to regulate inland consumption. A Prague bank officiates as the central place of sale. It settles monthly with all members.

PASTEBOARD.

Thirty-nine factories in Austria-Hungary are united in an agreement which is avowedly for the sole purpose of keeping up prices, which had threatened to sink very low. The compact lasts four years. It regulates production and prices, and divides the market among the members of the combination. Producers who join must surrender the territory in which they have been operating, and agree not to increase production beyond the quota assigned them.

TWINE.

Without an agreement between the makers of this article, it is alleged, the industry would have disappeared from Austria. It saved some members from impending bankruptcy. The combination was formed February 1, 1889. It denies having increased prices or interfered with foreign competition.

SIRUP AND GLUCOSE.

In 1892, a crop failure made the business so unprofitable that it was apparent many factories must close unless the usual competition was abated. An agreement between the manufacturers resulted, which regulates prices and production.

COPPER AND COPPER WARE.

The agreement relating thereto controls various operating expenses without specifically reducing production or dividing territory among the members of the combination.

SUGAR.

Fierce competition existed among refiners. Hungary sought to make all the sugar consumed in that Kingdom, which led to a supply beyond the normal demand. The decline in the export of sugar still further overstocked the domestic market. Some ten years ago, the discouraging conditions caused the producers to frame a mutual agreement providing against overproduction through the stipulation that no more sugar should be offered to the home market than would equal the consumption. The quantity normally consumed was divided among the refiners, so that none could, by competition, be driven out of business. The agreement included conditions regarding prices—not, it is claimed, to impose burdens on consumers, but to prevent a recurrence of the previous ruinous speculation. The producers of raw sugar, it appears, were empowered to regulate the size of the domestic sugar-beet crop, so far as the laws of nature would permit.

The agreement, while nominally limited to confining the amount of sugar produced within the amount actually consumed, has, in fact, caused prices to advance; but as against this it is set forth that the Austrian producers give the public relatively cheaper sugar than any other sugar-making country in the world.

LOCAL COMBINATIONS.

Peculiar tc the Reichenberg consular district are the following associations, all formed for the purpose of controlling production, prices, wages, or other expenses:

Bürgstein union for the production of frames; brewing society of Böhmisch Kamnitz; association of wood and metal working industries; Wartenberg dairy association; "Eagle works" society of glass industries; united clay works of Preschen; society of makers of clothing for men and women; Arnau brewing society; Hohenelbe and Trautenau societies of hotel and public-house keepers; association of fruit dealers; society of housebuilders; Riesengebirge union of weaving establishments; Mecerish dairy society; union of shoemaking firms; society of vegetable dealers; Hronow union of weaving industries; association of starch makers; society of dealers in honey and wax; Gabel dairy union; society of leather-goods producers; union of tailors and hat and glove makers; butchers' union; association of pearl producers.

In addition to the various closely-knit combinations noted in the foregoing, there are many looser and more limited forms of association among manufacturers, especially of cloth, in this district. Such organizations are merely for agreement upon some special matter—wages, prices, hours of labor, or the like. In fact, outside of agriculture, every important producing industry in the district is associated with others of the same kind in an agreement respecting some common feature of their business. The object in every case is to increase the profits of the concerns interested, or to protect themselves against probable losses. The tendency to combination and consolidation appears to steadily grow stronger.

The effect of the trade combinations here referred to has undoubtedly been to increase prices in many cases; in others, to prevent a decline in prices. Production for home consumption has been decreased in some lines; in others increased, but evidently not because of the trade combinations. Wages have apparently not been lowered, though increases have been checked in some cases. Producers realize that wages can not be lowered without causing distress to wage-earners, and therefore trade associations are inclined to increase their dividends or to create them where they are lacking by other means than by reducing the scanty earning of their employees.

FRANK W. MAHIN, *Consul.*

REICHENBERG, *July 5, 1900.*

PRAGUE.

The formation of trusts in Bohemia, and in fact in Austria, is carried on with some exceptions hereinafter named in a different manner than in the United States. Where in the United States a number of manufacturers desiring to form a trust organize themselves into a joint stock company, to which each of the organizers sells his plant at a stipulated price, receiving as payment a certain amount in cash and a certain amount in shares of stock of the new company, the manufacturers of Bohemia desiring to form a trust in any branch of their manufacture call a meeting for this purpose, at which all manufacturers of the respective branch are requested to be present. Some one being elected chairman, presents to the meeting the reason of its having been called and its object, which is of course, to prevent not only the decline of the price of the specific manufactured article, but also in many instances to raise the selling price of the same. After all manufacturers of the article to be protected by such a trust have agreed to become a member of the same, each manufacturer furnishes to a committee a statement of the production of his plant for the previous year or two and also of the sale of his product during the same period. The committee then ascertains from other sources statistics of the consumption or sale of the article within a given district, say for Bohemia during the same period, and having been furnished also with the costs of manufacture it is enabled to ascertain what the selling price of the article should be, making of course, due allowance for a reasonable profit to the manufacturer. Another general meeting of all parties concerned is then called and the committee makes its report. The question is put whether all the manufacturers are desirous and willing to enter into a mutual agreement whereby they bind themselves to place the sale of their article in the hands of a special board of trustees, to be elected by the meeting, and not to individually sell any of their products within a certain district, to be defined by said trustees, nor for a less price than the one fixed by said board.

All having voted in the affirmative, an attorney is employed to draw up the necessary agreement, which is recognized under the Austrian laws as being binding upon all parties thereto. The agreement contains the stipulations, etc., for which the quasi trust has been formed, and provides that in case of a violation of any of these by one of the signers, a certain sum is to be paid as a penalty. It is the common practice to either establish a so-called central office, to which all orders for the sale of the manufactured article must be sent, and which directs the filling of all such orders on equitable principles by the firms belonging to such a trust (the expenses of such an office being paid out of the selling price obtained by all parties concerned pro rata) or else enter into an agreement with a banking institution, which will attend to the business of such a trust for a certain commission on the selling price. The objects, it is claimed, are to prevent an overproduction of the manufactured article and the falling of the price in the home market; to establish a uniform selling price, and to guard against loss caused by delinquent debtors. These are the avowed objects of such trusts here, but their ulterior objects of course the public is not able to ascertain, as all these matters are kept strictly confidential and would only appear in case of an action at law being brought for some reason by one of the signers of the agreement against a cosigner; and if in such a case it should appear that one of the objects of the trust was to raise the selling price of the product unreasonably high, or to prevent honest competition, the courts here have held such an agreement to be void. One case of this nature having already been declared by the highest court at Vienna as being an unlawful agreement, the ministry of justice is at present working on a new law governing the formation of trusts. Under the afore-described system, there have been formed and at present exist the following-named trusts in Austria-Hungary, under the following names, viz:

(1) *Raw sugar and sugar refineries* (Gemeinsames Comité der vereinigten Rohzuckerfabriken und Raffinerien Oesterreich-Ungarns, mit dem Sitze in Wien).—To this trust belong about 250 raw-sugar factories and refineries, and the raw-sugar producers are bound to sell their product only to refineries which belong to the trust, and the selling prices are fixed by the central office, located in Vienna.

(2) *Petroleum* (Evidenzbureau der österreich-ungarischen Petroleumraffinerien, mit dem Sitze in Wien).—To this belong all the important petroleum refineries in Austria-Hungary, central office in Vienna.

(3) *Iron* (Verkaufsbureau der Prager Eisenindustrie-Gesellschaft in Wien).—This trust has a central office in Vienna and a branch office in Prague, and to it belong all the iron producers and dealers in Austria, but those of Hungary have so far refused to become members.

(4) *Wire and wire nails* (Commercielles Bureau der Draht- und Drahtstift-Fabriken Böhmens, mit dem Sitze in Prag).—To this trust belong only the 6 large wire and wire-nail factories of Bohemia, which have their central office in Prague.

(5) *Aluminate* (Schwefelsaure Thonerde, represented by 6 factories of Hungary; Bleizucker, represented by 6 factories of Austria-Hungary; and acetic acid, Essigsaures Natron, represented by 3 factories of Austria-Hungary).—These three various industries have formed a trust, which is represented by the Imperial Royal Bohemian Union Bank in Prague, as its selling agent.

(6) *Soda* (Central-Verkaufsbureau der vereinigten österreich-ungarischen Sodafabriken in Wien).—To this belong all producers of soda in Austria-Hungary.

(7) *Fertilizer* (Verband der österreich-ungarischen Superphosphat-Fabriken in Prag).—To this trust belong nearly all the manufacturers of fertilizer in Austria-Hungary, with the central office in Prague.

(8) *Pasteboard* (Central-Verkaufs-Bureau der österreich-ungarischen Holzpappen-Fabriken, mit dem Sitze in Wien, beim Wiener Bankverein).—To this trust belong all the 200 pasteboard factories and wood-pulp factories of Austria-Hungary, and they do the business through the banking institution in Vienna, known as the Wiener Bank Verein.

(9) *Colored paper* (K. k. priv. österreichische Länderbank, Waaren-Abtheilung, Papier-Section).—To this belong all the principal manufacturers of colored paper in Austria-Hungary. The central office is in Vienna, and its business is conducted, as the name indicates, by the Imperial Royal priv. Austrian Länderbank.

(10) *Borax.*—This is an international trust with its central and main office in London. The raw article is furnished from England to the various refineries and factories on the Continent here, and the price for the raw as well as the refined article is fixed by the London office.

(11) *Mirror glass* (Verkaufsbureau der vereinigten österreichischen Spiegelglasfabrikanten, mit dem Sitze in Pilsen).—To this trust belong all the mirror glass factories in Austria. Aside from the above-named trusts, a number of manufacturers not strictly in a trust have yet mutually agreed to sell their products at a stipulated price only. This includes manufacturers of glucose, table glassware, and glue. They have no other offices than their own and each conducts his business himself, only keeping up the agreed selling price.

There have also been formed two trusts on the American plan, which seems to meet with more favor here than the one hereinbefore described, especially as it is claimed that the Government of Austria looks favorably on the formation of joint stock companies.

(1) *Fez.*—The one company is called Actien-Gesellschaft der österreichischen Fezfabriken in Wien. This is a trust formed by the fez manufacturers of Austria, with a capital stock of 6,400,000 crowns ($1,280,000), having its central office at Vienna.

(2) *Glassware.*—This is called C. Stoelzles Söhne, Actien-Gesellschaft für Glasfabrikation in Wien. Its capital stock is 5,000,000 florins ($2,000,000). The objects of these last two-named trusts are claimed to be the same in principle as those described, but the manufacturers belonging to them have sold their plants to the newly organized corporation, and are now stockholders in the same.

There is no possibility of ascertaining the value of the separate plants or the stock valuation of any corporation representing a trust.

EMIL KUBINZKY, *Vice-Consul.*

PRAGUE, *August 31, 1900.*

BELGIUM.

ANTWERP.

No trade combinations exist in the city or province of Antwerp. The manufacturing interests in this country are centered for the greater part in the province of Brabant, in which is located the capital, Brussels; in the provinces of Liége, Hainaut, and Namur.

Every capitalist, financier, manufacturer, and merchant questioned by me on the subject has replied that no such combinations as are termed trusts in the United States exist anywhere within the limits of this Kingdom. Whether or not this is strictly exact, it is not possible for me to say. It is certain that there are combinations of manufacturing interests in certain localities, but just what the provisions of these combinations or syndicates are is naturally known only to the individuals therein participating, and the public is not taken into their confidence. It would seem, however, on the other hand, that if these combinations exercised any very marked effect upon the price of products consumed in this country, the matter would have been brought to the attention of the public through the press or other like means.

COAL.

That the coal producers have an agreement among themselves, limiting the output of their mines and fixing the price of the various kinds of their product, is very certain.

From a source which seems reliable, the fact was brought to my notice that the real reason why the Government during the past year made such comparatively large purchases of coal from England was because the combination maintained prices to which the State did not wish to submit. Of course, the real cause was not made public and the alleged excuse was that the necessity for a different supply was caused by the adoption of the English pattern of locomotive construction. Locomotives of the style referred to are now in quite general use on the fast-running trains of the country.

The list of the coal-mine owners, as well as the extent of territory worked by each, together with a description of the nature of their product, will be found in my report, lately forwarded, entitled "The coal industry in Belgium."[1]

PLATE GLASS.

Another combination is formed of the plate-glass manufacturers of Belgium. This syndicate is made in connection with similar ones existing among the manufacturers of France, Germany, and Italy. It is stated that the production of Belgium is equal to the French and the German production together, while that of England amounts to only about one-third of the Belgian. The English manufacturers do not take part in this combination, but are in accord with it so far as the fixing of prices is concerned.

So far as the consumption of plate glass is concerned, England is the most important customer, taking from 65 to 70 per cent of the Belgian production. As comparatively little is consumed in the country, I have heard no complaint against this combination of raising prices to the consumer, etc. It can be said, generally speaking, that this branch of industry is in a very flourishing condition, although naturally the Belgian manufacturers are very much put out at having practically lost the market in our country. This industry has suffered recently from the increased price of coal, as described in my article before mentioned.[1]

A list of the companies forming part of this syndicate, as well as the capital employed by each, is as follows:

Company.	Locality.	Capital.	Director.
Société Anonyme des Glaces d'Auvelais.	Auvelais	$1,061,500	J. Detry.
Société Anonyme des Glaces de Charleroi	Raux	675,500	J. Henin.
Société Anonyme de Courcelles pour la Fabrication de Glaces.	Courcelles	675,500	Albert Droit.
Société Anonyme pour la Fabrication de Glaces, Campagnie de Floreffe.	Floreffe	579,000	Oscar Misonne.
Société des Glaces de Moustier-sur-Sambre.	Moustier sur Sambre	579,000	Aug. Robert.
Société des Glaces Nationales Belges	Auvelais, St. Roch	868,500	A. Lemclette.
Société Anonyme des Glaces de Ste.-Marie d'Oignies.	Ste. Marie d'Oignies	965,000	
Société des Glaces de Raux	Raux	579,000	Jules Gernaert.

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[1] See Special Consular Reports, Vol. XXI, Part I.

SUGAR-REFINING INTERESTS.

What has been observed in regard to glass manufacturers is said to be true, also, of the sugar-refining interests. Prominent companies, to wit: Raffinerie Tirlemontoise (Société Anonyme), Tirlemont; Ch. Graffe & Co., Brussels; Raffinerie Bruxelloise (Société Anonyme), Brussels; Meeus frères & Cie., Antwerp; Raffinerie Belge (Société Anonyme), Antwerp, and Gevers frères, Antwerp, have formed a syndicate, for a period not known to me, for the purpose of fixing the price at which their product should be sold for internal consumption, as well as fixing the quantity which each manufacturer should furnish for a stated price. Every refinery, however, has a right to buy its raw sugar wherever it will and at any price it chooses to pay, and to sell for exportation at any price desired. A refinery not working is paid a certain indemnity by the other five in the combination. There is no syndicate known to exist among the manufacturers or dealers in the raw product.

It is claimed here that the organizations referred to differ from the trusts known to us, for the reason that there is no association of capital. Labor unions exist, as in our country, and are looked upon here in the same light as the syndicates of capital above referred to, for the reason that the members bind themselves to work only upon the payment of certain wages and for hours fixed by the leaders of the union.

GEO. F. LINCOLN,
Consul-General.

ANTWERP, *May 19, 1900.*

BRUSSELS.

Until the creation of the coke trust by the Blast Furnace Association of Belgium,[1] trusts as understood in the United States were unknown in this distict, although trade combinations, called syndicates and sociétés anonymes, embracing all branches of industry and commerce, formed for the purpose of controlling the market, have existed here for years. Manufacturers, producers, and dealers competing in the same line of goods form a syndicate and agree upon a given selling price, but continue to operate their enterprises independently, with nothing in common beyond the above-mentioned agreement. Joint-stock companies, however, operate extensive enterprises, issue bonds and shares, and pay dividends. During a recent debate in the Belgian House of Representatives relative to the petroleum monopoly in Belgium, the result showed that the balance of opinion was strongly in favor of trusts.

An international glass trust has recently been formed, incorporating that industry in France, Germany, Belgium, Italy, Austria, and Bohemia, and negotiations are now being carried on with English manufacturers, with the ultimate object of embracing all the works of glass-producing countries in the trust.

Belgian manufacturers will profit as regards not only prices but production. As trusts control the market, production will be regulated without disadvantage to any particular country. All orders are sent direct to the international trust, which distributes them according to the importance of the groups, and each group divides its orders among its members. For example, the Belgian office at Charleroi, the center of the glass industry in this country, receives orders for the Belgian group and distributes them among the members.

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[1] See report on p. 440.

As Belgium may be said to be a purely manufacturing country, the demand for fuel is constant and increasing. The price of coal not only influences the rate of wages, but the cost of the necessaries of life, both of which have increased as coal advanced. During the past five or six years, coal has steadily risen in price until the figures now quoted are the highest known since 1870. It is not admitted that a coal trust exists in Belgium, but as the prices increase with great uniformity, it may be assumed that perfect harmony exists between mine owners, and that competition is almost abolished.

I have communicated verbally and by writing with several of the leading bankers, industrial associations, prominent merchants, and promoters in this city relative to the subject-matter of this report, and regret to say that they have expressed their inability to answer my inquiries regarding value of plants, advantages of trusts, syndicates, wages, and production.

I have also been unable to obtain any printed matter regarding trade combinations in this consular district. I annex a list of the principal ones, showing corporation name, industry engaged in, location, capital employed, and stock valuation of each combination.

I attach herewith a report of the consular agent at Charleroi on the subject, and also the only obtainable printed copy of a debate relative to the monopoly of the petroleum trade in Belgium.[1]

GEO. W. ROOSEVELT, *Consul.*

BRUSSELS, *May 14, 1900.*

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[1] Filed for reference in Bureau of Foreign Commerce.

Principal trade combinations in the consular district of Brussels, Belgium.

Corporation name.	Locality.	Industry.	Date of organization.	Capital.		Valuation of stocks.	
				Francs.	United States equivalent.	Francs.	United States equivalent.
Société Anonyme des Abattoirs et Marchés d'Anderlecht.	Anderlecht	Slaughterhouses and markets	May 12, 1888	3,750,000	$723,750.00	500	$96.50
L'Accumulateur Sec	Brussels	Electricity	Oct. 13, 1897	1,000,000	193,000.00	500	96.50
Société Internationale de l'Acétylène	do	Manufacture of acetylene for lighting.	Aug. 21, 1896	6,000,000	1,158,000.00	100	19.30
L'Acide Carbonique Pur	Molenbeek St. Jean	Carbonic acid	Jan. 28, 1897	1,250,000	241,250.00	100	19.30
Aciéries de Charleroi	Marcinelle	Steel	Dec. 28, 1896	1,000,000	193,000.00	500	96.50
Aciéries, Forges et Fabriques de Chaîmes d'Odessa.	Brussels	do	Nov. 10, 1896	1,700,000	328,100.00	250	48.25
Agglomérés Chimiques pour le Blanchiment du Linge.	Baudour	Chemicals	Feb. 10, 1898	1,000,000	193,000.00	250	48.25
Agglomérés Réunis du Bassin de Charleroi	Marcinelle	Coal and coal tar	Sept. 30, 1893	3,600,000	694,800.00	500	96.50
Société Anonyme Universelle des Alcools et Liqueurs.	Brussels	Distillery, alcohol	Aug. 24, 1889	13,750,000	2,653,750.00	....	....
L'Almendarés, Fabrique de Ciments Portland	do	Manufacture of cement	July 31, 1897	1,000,000	193,000.00	100	19.30
Alumine Belge	do	Chemical productions	June 15, 1897	1,000,000	193,000.00	250	48.25
Société Nouvelle pour les Applications Diverses de l'Éclairage et de l'Électromotion.	do	Electrical and gas lighting apparatus.	Jan. 27, 1894	1,000,000	193,000.00	100	19.30
Association Sucrière de Genappe	Genappe-Loupoigne	Manufacture of beet sugar	Dec. 30, 1889	1,000,000	193,000.00	500	96.50
Ateliers de Bruxelles	Brussels	Machinery	Sept. 7, 1898	1,000,000	193,000.00	100	19.30
Ateliers de Construction de Boussu	Boussu	do	July 17, 1873	1,300,000	250,900.00	500	96.50
Atelier de Construction de Gorlovka (Donetz)	Gilly	do	Apr. 18, 1896	2,000,000	386,000.00	500	96.50
Ateliers de Construction de Hal	Hal	do	Aug. 8, 1898	1,050,000	202,650.00	500	96.50
Ateliers de Construction de Joseph Pâris	Marchiennes au Pont	Iron bridges	July 9, 1897	1,000,000	193,000.00	100	19.30
Forges et Fonderies du Midi de Charleroi	Marcinelle	Machinery and iron	Apr. 17, 1897	1,000,000	193,000.00	250	48.25
Ateliers du Brabant	Molenbeek St. Jean	Machinery	Sept. 23, 1897	7,000,000	1,351,000.00	1,000	193.00
Ateliers Nicaise et Delcuve	La Louvière	Railway material	Nov. 12, 1889	1,500,000	289,500.00	500	96.50
Hauts-Fourneaux Lorrains (Aumetz-La Paix)	Brussels	Iron and steel	May 15, 1897	15,000,000	2,895,000.00	500	96.50
Société Générale des Automobiles	do	Automobiles	Oct. 22, 1897	2,000,000	386,000.00	100	19.30
Société Anonyme des Allumettes Russes	do	Matches	Aug. 21, 1895	1,000,000	193,000.00	100	19.30
Compagnie des Alcools Russes	do	Distillery	June 10, 1891	3,000,000	579,000.00	500	96.50
Usines et Fonderies de Baume et Marpin	Haine St. Pierre	Iron railway material	Nov. 15, 1892	2,750,000	530,750.00	225	43.42
Société Anonyme Bec Cluer	Brussels	Lighting apparatus	July 5, 1895	4,000,000	772,000.00	100	19.30
Société Anonyme Bec Soleil	do	do	Sept. 19, 1897	1,000,000	193,000.00	100	19.30
La Biscuiterie Nationale Belge	do	Biscuits and chocolate	Sept. 3, 1896	1,300,000	250,900.00	100	19.30
Ateliers de Construction du Nord	Marchienne au Pont	Iron railway material	June 25, 1895	1,200,000	231,600.00	100	19.30
Boulonneries Franco-Russes	Brussels	do	Mar. 19, 1898	1,000,000	193,000.00	100	19.30
Société des Bouteilles de Courcelles	Courcelles	Bottles	Oct. 23, 1897	1,000,000	193,000.00	250	48.25
Boutelleries du Donetz	Brussels	do	Nov. 14, 1896	2,500,000	482,500.00	500	96.50
Grande Brasserie de Kockelberg	do	Brewery	May 27, 1895	1,000,000	193,000.00	500	96.50
Briquettes de Houille du Nord	Marchienne au Pont	Coal	Mar. 6, 1897	2,500,000	482,500.00	500	96.50
Compagnie des Bronzes	Brussels	Bronze	Jan. 3, 1895	1,000,000	193,000.00	500	96.50
Compagnie Générale de Diamants du Brésil	do	Diamonds	Nov. 28, 1889	2,400,000	463,200.00	250	48.25
Société des Carrières de Porphyre	do	Quarry	Feb. 15, 1882	1,000,000	193,000.00	250	48.25

Principal trade combinations in the consular district of Brussels, Belgium—Continued.

Corporation name.	Locality.	Industry.	Date of organization.	Capital.		Valuation of stocks.	
				Francs.	United States equivalent.	Francs.	United States equivalent.
Carrière de Payelles	Ecaussinnes-Lalaing	Quarry	Dec. 15, 1897	1,250,000	$241,250.00	500	$96.50
Carrières de Porphyre de Quenast	Brussels	do	Aug. 12, 1864	4,500,000	868,500.00	500	96.50
Carrières de Saint-Georges	do	do	May 24, 1881	1,600,000	308,800.00	250	48.25
Carrières de Scouffleny	Ecaussinnes-Lalaing	do	Oct. 6, 1897	1,000,000	193,000.00	500	96.50
Carrières Franco-Belges de Vireux	Brussels	do	Oct. 3, 1893	1,300,000	250,900.00	500	96.50
Carrières du Levant d'Ecaussinnes	Ecaussinnes d'Enghien	do	Sept. 19, 1896	1,250,000	241,250.00	250	48.25
Carrières et Sucreries P. J. Wincqz	Soignies	Quarry and sugar manufacture.	Jan. 31, 1860	2,200,000	424,600.00	500	96.50
Carrières du Nord des Ardennes Françaises	Montigny sur Meuse	Quarry	Dec. 24, 1891	1,000,000	193,000.00	500	96.50
Carrières et Fours à Chaux de Chercq	Chercq	Quarry, cement, and lime	Sept. 23, 1874	1,000,000	193,000.00	500	96.50
Carrière Sainte-Barbe	Soignies	Quarry	Feb. 25, 1893	1,000,000	193,000.00	500	96.50
Chantiers Navals de Nicolaïef	Boufflouix	Material for navigation and railway.	Sept. 25, 1895	18,000,000	3,474,000.00	1,000	193.00
Chardonnages d'Aisean-Presles	Farciennes	Coal	June 3, 1890	1,600,000	308,800.00	100	19.30
Société Franco-Belge du Charbonnage de Fortetaille.	Montigny le Tilleul	do	Oct. 10, 1886	1,000,000	193,000.00	250	48.25
Grande Machine à Feu de Dour	Dour	do	Dec. 31, 1867	3,000,000	579,000.00	500	96.50
Charbonnages de La Lougan	Brussels	do	Dec. 21, 1895	2,700,000	521,100.00	500	96.50
Charbonnages des Produits du Flénu	Flénu	do	1835	4,000,000	772,000.00	1,000	193.00
Charbonnages d'Ormont	Chatelet	do	May 2, 1900	2,640,000	509,520.00	500	96.50
Charbonnages du Bois Communal de Fleurus	Fleurus	do	May 23, 1896	2,000,000	386,000.00	500	96.50
Charbonnages du Bois Saint-Ghislain	Dour	do	Oct. 5, 1839	3,600,000	694,800.00	250	48.25
Charbonnages du Carabinier	Chatelet	do	Dec. 5, 1860	2,000,000	386,000.00		
Compagnie des Charbonnages Belges	Frameries	do	Apr. 28, 1846	10,244,500	1,977,188.50	500	96.50
Charbonnages d'Amercœur	Jumet	do	Aug. 23, 1880	1,310,500	252,926.50		
Charbonnages de Bielaïa (Donetz)	Brussels	do	Dec. 11, 1895	4,000,000	772,000.00	500	96.50
Société des Charbonnages de Brey-Maurage	Maurage	do	June 16, 1869	6,000,000	1,158,000.00	500	96.50
Charbonnages de Courcelles, Nord	Courcelles	Coal and coke	May 22, 1838	5,250,000	1,013,250.00	500	96.50
Charbonnages de Fontaine-l'Evêque	Fontaine l'Evêque	Coal	May 13, 1874	4,000,000	772,000.00		
Charbonnages de Haine-Saint-Pierre et la Hestre.	La Hestre	Coal and coke	Oct. 22, 1877	3,000,000	579,000.00		
Charbonnages de Houssu	Haine St. Paul	do	Sept. 13, 1886	3,500,000	675,500.00	1,000	193.00
Charbonnages de La Louvière	La Louvière	do	June 18, 1886	6,600,000	1,273,800.00		
Charbonnages de Monceau-Bayemont et Chauw-à-Roc.	Marchienne au Pont	Coal	June 7, 1873	2,000,000	386,000.00	200	38.60
Charbonnages de Monceau sur Sambre	Monceau sur Sambre	Coal and coke	Apr. 31, 1882	4,500,000	868,500.00	1,000	193.00
Charbonnages de Noël Sart-Culpart	Gilly	Coal	June 26, 1875	2,500,000	482,500.00		
Charbonnages de Rykovski (Donetz)	Brussels	Coal, coke, and iron	July 5, 1898	8,000,000	1,544,000.00	500	96.50
Charbonnages de Varvaropol	Charleroi	Coal and coke	Dec. 21, 1895	4,060,000	772,000.00	5,000	965.00
Charbonnages des Chevalières de Dour	Dour	do	Nov. 2, 1866	1,500,000	289,500.00		
Charbonnages des Grands Conty Spinois	Gosselies	Coal	Apr. 29, 1876	2,500,000	482,500.00	500	96.50
Charbonnages des Viviers Réunis	Gilly	do	July 1, 1887	1,000,000	193,000.00		
Charbonnages du Bassin de Budapest	Brussels	do	May 24, 1898	3,000,000	579,000.00	250	48.25
Couchant du Flénu	Quaregnon	do	Feb. 26, 1856	1,095,380	211,408.31		

Charbonnages du Gouffre	Chatelineau	Coal and coke	Feb. 28, 1882	1,782,000	343,926.00	500	96.50
Charbonnages du Grand-Mambourg-Sablonnières	Montigny sur Sambre	Coal	Sept. 15, 1881	3,660,000	706,380.00		
Charbonnages du Levant du Flénu	Cuesmes	do	Oct. 14, 1835	2,100,000	405,300.00	500	96.50
Charbonnages du Midi de Mons	Ciply	do	June 28, 1880	3,000,000	579,000.00	250	48.25
Charbonnages du Nord de Charleroi	Roux	do	Oct. 19, 1853	3,600,000	694,800.00		
Charbonnages du Nord du Flénu	Ghlin	Coal and coke	Mar. 1, 1878	7,635,000	1,473,555.00		
Charbonnages du Poirier	Montigny sur Sambre	Coal	Dec. 20, 1886	2,100,000	405,300.00		
Charbonnages du Rieu-du-Cœur	Quaregnon	do	Apr. 29, 1890	3,389,363	654,147.03		
Charbonnages Belge-Hongrois	Brussels	do	May 8, 1897	4,000,000	772,000.00	500	96.50
Charbonnages Prokhorow (Donetz)	do	Coal and coke	Mar. 14, 1895	8,000,000	1,544,000.00	500	96.50
Charbonnages et Mines de Colombie	do	Coal	June 15, 1898	10,000,000	1,930,000.00	100	19.30
Charbonnages Réunis à Charleroi	Charleroi	Coal and coke	July 7, 1851	6,700.000	1,293,100.00	500	96.50
Charbonnages Unis de l'Ouest de Mons	Boussu	do	Apr. 9, 1868	7,833,000	1,511,769.00	500	96.50
Charbonnages Réunis de Challern	Brussels	Coal	Apr. 23, 1898	6,000,000	1,158,000.00	500	96.50
Charbonnages de Willem Sophia	do	do	Oct. 12, 1898	3,000,000	579,000.00	500	96.50
Compagnie Internationale de Chauffage Hygiénique.	do	Heating apparatus	Sept. 24, 1895	1,000,000	193,000.00	100	19.30
Compagnie Générale des Ciments Portland de l'Escant.	Tournai	Cement	Apr. 14, 1892	1,400,000	270,200.00	500	96.50
Ciments de Visé	Brussels	do	Oct. 12, 1898	1,500,000	289,500.00	250	48.25
Ciments et Fours à Chaux de Bielaïa (Donetz)	do	do	May 4, 1898	2,000,000	386,000.00	100	19.30
Ciments et Plâtres de Vilvorde	Vilvorde	Cement and plaster	Mar. 1, 1897	1,000,000	193,000.00	500	96.50
Ciments de Portland d'Auxi-le-Chateau (Pas de Calais).	Brussels	Cement and lime	Feb. 4, 1896	2,500,000	482,500.00	25	4.82
Colonial Rubber	do	Rubber	Apr. 12, 1898	2,640,000	509,520.00	100	19.30
Compteur Électrique	Ixelles	Heating and lighting	Apr. 10, 1897	1,500,000	289,500.00	500	96.50
Nouvelle Manufacture Belge de Confection	Brussels	Clothing	Mar. 26, 1898	1,000,000	193,000.00		
Confection et Réparation des Chaussures	St. Gilles	Shoes	Mar. 15, 1898	1,000,000	193,000.00	25	4.82
Construction pour Matériels de Chemin de Fer	Vilvorde	Material for railways	Apr. 18, 1891	1,650,000	318,450.00	500	96.50
Construction des Ateliers de Willebroeck	Brussels	Boilers	Aug. 12, 1875	1,000,000	193,000.00	500	96.50
Construction Métallique d'Odessa	do	Scales and weights	June 4, 1896	1,250,000	241,250.00	100	19.30
The Continental Catadura Company	Molenbeek	Wines	Apr. 14, 1897	1,200,000	231,600.00	100	19.30
The Continental Hall Signal Company	Brussels	Signals	Apr. 29, 1898	1,500,000	289,500.00	100	19.30
The Continental Bodega Company	do	Wines	Apr. 17, 1883	1,200,000	231,600.00	500	96.50
Société Cotomeière de Saint-Étienne de Rouvray	do	Cotton goods	July 12, 1883	4,000,000	772,000.00	500	96.50
Couleurs à Base de Plomb	do	Colors	Aug. 17, 1898	1,000,000	193,000.00	100	19.30
La Cutlan	do	Shoes	May 7, 1896	1,000,000	193,000.00	100	19.30
Société des Cycles et Automobiles Belgica	Molenbeek	Cycles and automobiles	Feb. 2, 1898	1,000,000	193,000.00	500	96.50
Grande Distillerie Cusenier	St. Gilles	Distillery	Oct. 27, 1880	1,000,000	193,000.00	100	19.30
Distilleries et Sucreries Réunies de Hal	Hal	Distillery and sugar	Sept. 8, 1892	2,000,000	386,000.00		
Société Anonyme Belge d'Éclairage	Brussels	Lighting	Oct. 5, 1895	2,000,000	386,000.00	100	19.30
Compagnie Méridionale d'Éclairage	do	do	Dec. 10, 1895	2,500,000	482,500.00	100	19.30
Éclairage du Bassin Houiller de Mons	Wasmuel	Gas, coke, and tar	Oct. 13, 1881	2,023,000	390,439.00	500	96.50
Éclairage du Centre	Brussels	Lighting	Dec. 27, 1882	3,000,000	579,000.00	500	96.50
Éclairage et Chauffage par le Gaz	do	Gas lighting and heating	Aug. 2, 1862	11,677,500	2,253,757.50	500	96.50
Éclairage et Chauffage en Perse	do	Gas	Nov. 4, 1891	1,800,000	347,400.00	500	96.50
Électricité à Domicile	do	Electricity	Oct. 28, 1897	1,000,000	193,000.00	100	19.30
Compagnie Électro-Magnétique	do	Electric apparatus	Apr. 27, 1898	1,000,000	193,000.00	250	48.25
Société Anonyme Électro-Sucrière	do	Sugar	May 28, 1898	2,000,000	386,000.00	500	96.50
Société Anonyme des Établissements	do	Machinery	Jan. 26, 1893	1,000,000	193,000.00	500	96.50
Exploitation de l'Acétylène	do	Acetylene	Mar. 2, 1896	2,500,000	482,500.00	500	96.50
Société Anonyme Bruscelloise de l'Acétylène Pur.	do	do	Mar. 7, 1896	2,000,000	386,000.00	100	19.30
Brevets Reuse aux États-Unis	do	Cigar-making machines	Mar. 24, 1896	2,500,000	482,500.00	500	96.50

Principal trade combinations in the consular district of Brussels, Belgium—Continued.

Corporation name.	Locality.	Industry.	Date of organization.	Capital.		Valuation of stocks.	
				Francs.	United States equivalent.	Francs.	United States equivalent.
Brevets Reuse en Belgique	Brussels	Cigar-making machines	Feb. 22, 1896	1,000,000	$193,000.00	500	$96.50
Machines à Fabriquer les Cigarettes	do	Cigarette-making machinery	May 23, 1896	1,600,000	308,800.00		
Fabrication des Bouteilles à Odessa	do	Bottles	Dec. 28, 1892	2,000,000	386,000.00	500	96.50
Fabrication de Cartouches et de Projectiles	Anderlecht	Ammunition	May 18, 1882	1,000,000	193,000.00	500	96.50
Fabrication de Ciments à Odessa	Brussels	Cement	May 15, 1895	2,500,000	482,500.00		
Fabrication Métallurgique des Corps Creux	do	Molding iron	Aug. 3, 1896	3,000,000	579,000.00	100	19.30
Fabrication des Émaux Artistiques	do	Glass	Oct. 28, 1895	1,000,000	193,000.00	100	19.30
Fabrication des Matières Premières pour Chapellerie.	Molenbeek	Hatters' materials	Nov. 30, 1893	1,010,000	194,930.00	1,000	193.00
Fabrique de Fer de Charleroi	Marchienne au Pont	Iron and steel	July 24, 1875	1,000,000	193,000.00	500	96.50
Fabrique de Produits Chimiques du Brabant	Brussels	Chemical products	Sept. 5, 1895	1,250,000	241,250.00	500	96.50
Fabrique de Tresses et Lacets Torley	do	Braids and button stock	Jan. 25, 1898	1,350,000	260,550.00	500	96.50
Faïencerie de Nimy	Nimy	Earthenware	Dec. 16, 1890	1,800,000	347,400.00	500	96.50
Manufactures de Feutres et Chapeaux	Cureghem	Hats and hatters' materials	Mar. 24, 1875	4,000,000	772,000.00	500	96.50
Feutres et Chapeaux à Varsovie	Brussels	do	Feb. 26, 1898	1,500,000	289,500.00	250	48.25
Filature des Laines Peignées	Tournai	Woolen mills	Feb. 27, 1884	1,282,000	247,426.00	1,000	193.00
Filiale Belge Néerlandaise d'Aluminium	Brussels	Aluminum, soda, etc	Apr. 1, 1896	3,000,000	579,000.00	100	19.30
Compagnie de Floreffe	Floreffe	Plate and window glass and glassware.	May 7, 1853	6,000,000	1,158,000.00	500	96.50
Société Anonyme de Forage	Brussels	Mining apparatus	Apr. 20, 1898	1,200,000	231,600.00		
Force et Éclairage	do	Electricity	May 4, 1896	1,000,000	193,000.00	1,000	193.00
Forges de Clabecq	do	Ironworks	Oct. 11, 1888	2,500,000	482,500.00	500	96.50
Forges et Aciéries d'Ekatrinoslaw (Donetz)	do	Iron and steel works	Sept. 21, 1898	5,000,000	965,000.00	500	96.50
Forges et Laminoirs de Baume	Baume	Ironworks and rolling mills	Feb. 25, 1881	1,500,000	289,500.00	100	19.30
Forges et Laminoirs de l'Alliance	Marchienne au Pont	Iron and steel	Feb. 1, 1881	1,000,000	193,000.00	100	19.30
Forges et Laminoirs de Saint-Fiacre	Monceau sur Sambre	Iron and rolling mills	Sept. 26, 1880	1,500,000	289,500.00	500	96.50
Forges et Laminoirs de Saint-Victor	Marchienne au Pont	Ironworks and rolling mills	May 21, 1897	1,100,000	212,300.00	100	19.30
Forges, Usines et Fonderies de Gilly	Gilly	Machinery and railway materials.	Sept. 2, 1895	1,000,000	193,000.00	100	19.30
Forges, Fonderies et Laminoirs du Marais	Montigny sur Sambre	Iron works, foundries, rolling mills.	June 19, 1891	1,000,000	193,000.00	500	96.50
Forges, Usines et Fonderies de Haine Sainte-Pierre	Haine St. Pierre	Iron works and foundry	July 15, 1838	1,500,000	289,500.00	500	96.50
Compagnie des Tabacs Égyptiens	Brussels	Tobacco	June 13, 1898	2,000,000	386,000.00	100	19.30
Compagnie de Caoutchouc de Luabo	do	Rubber	Dec. 9, 1898	1,000,000	193,000.00	100	19.30
La Fortis	do	Powder and explosives	Dec. 15, 1896	2,500,000	482,500.00	500	96.50
Compagnie Internationale du Gaz	do	Gas	Mar. 1, 1889	5,000,000	965,000.00	500	96.50
Gaz de Namur	Namur	Gas and electricity	Feb. 22, 1883	1,700,000	328,100.00	500	96.50
Gaz de Rio de Janeiro	Brussels	Gas	Mar. 17, 1886	11,000,000	2,123,000.00	500	96.50
Compagnie Hongroise de Gaz et d'Électricité	do	Gas and electricity	Dec. 12, 1896	6,000,000	1,158,000.00	500	96.50
Société Commerciale Belge Gaz Électricité	Schaerbeek	do	Nov. 20, 1891	4,000,000	772,000.00	500	96.50
Glaces d'Auvelais	Auvelais	Plate glass	May 1, 1875	2,000,000	386,000.00	500	96.50
Glaces de Charleroi	Roux	do	Sept. 17, 1896	2,500,000	482,500.00	500	96.50
Fabrication des Glaces	Courcelles	do	July 27, 1870	2,500,000	482,500.00	500	96.50

Glaces de Moustier-sur-Sambre	Moustier sur Sambre	do	Aug. 27, 1883	3,000,000	579,000.00	500	96.50
Glaces de Roux	Roux	do	May 27, 1868	3,000,000	579,000.00	250	48.25
Glaces Nationales Belges	St. Roche Auvelais	do	Sept. 16, 1889	2,500,000	482,500.00	500	96.50
Manufacture de Glaces	Brussels	Plate and window glass and glassware.	Oct. 7, 1862	9,000,000	1,787,000.00	500	96.50
Glaces de Sainte-Marie d'Oignies	Aiseau	Glass of all kinds	Oct. 13, 1876	4,000,000	772,000.00	500	96.50
Glacières de Bruxelles	Brussels	Artificial ice	Dec. 20, 1880	1,000,000	193,000.00	500	96.50
Hauts-fourneaux de Monceau-sur-Sambre	Monceau sur Sambre	Blast furnace	July 10, 1873	3,000,000	579,000.00	500	96.50
Hauts-fourneaux de Toula	Brussels	do	Oct. 12, 1895	7,500,000	1,447,500.00	100	19.30
Hauts-forneaux de Sud de Chatelieneau	do	Blast furnace and coke oven	Sept. 7, 1889	1,500,000	289,500.00	500	96.50
Hauts-fourneaux et Fonderies de La Louvière	La Louvière	Blast furnaces and foundries	June 30, 1895	1,150,000	221,950.00	500	96.50
Houillères d'Anderlues	Anderlues	Coal	Sept. 28, 1861	2,195,000	423,635.00	100	19.30
Usines du Bassin de Charleroi	Gilly	Coal, coke, and tar	May 12, 1868	7,500,000	1,447,500.00	500	96.50
Le Khédive	Brussels	Cigarettes	June 24, 1896	1,000,000	193,000.00	100	19.30
Laminoirs à Tôle de La Louvière	La Louvière	Sheet iron and steel	Aug. 1, 1884	1,000,000	193,000.00	250	48.25
Laminoirs de la Croyère	do	Rolling mills	June 25, 1896	1,250,000	241,250.00	250	48.25
Usines de la Providence	Marchienne au Pont	Iron and steel works	Feb. 3, 1838	8,000,000	1,544,000.00	1,000	193.00
Laminoirs de Dampremy-Olloy	Dampremy	Iron	Dec. 21, 1889	1,000,000	193,000.00	250	48.25
Linière Tournaisienne	Tournai	Linen	July 5, 1881	1,300,000	250,900.00	500	96.50
Compagnies des Lits Militaires	Brussels	Army supplies	Jan. 7, 1893	3,192,000	616,056.00		
Société Anonyme de Loth	do	Woolen mills	May 18, 1859	3,000,000	579,000.00	500	96.50
Lovania	Louvain	Chemical products	Jan. 11, 1896	1,350,000	260,550.00	250	48.25
Maison Beer	Jemeppe sur Meuse	Machinery	Dec. 17, 1894	1,900,000	231,600.00	500	96.50
Maison Papin-Dupont	Mons	Wines	July 24, 1890	1,150,000	221,950.00	500	96.50
Société Générale de Maltose	Brussels	Malt	Apr. 22, 1893	2,000,000	386,000.00	500	96.50
Manufacture de Cuirs à Chapeaux	Cureghem	Hat leather	May 29, 1895	1,000,000	193,000.00	250	48.25
Marbre Instantané	Brussels	Artificial marble	June 23, 1898	1,000,000	193,000.00	500	96.50
Société Anonyme Marcinelle et Couillet	Couillet	Iron and steel works	June 20, 1835	8,235,600	1,589,470.80	500	96.50
Mégisserie Belge	Cureghem	Leather and skins	Apr. 14, 1894	1,000,000	193,000.00	250	48.25
Société de Merles-le-Château	Merles le Château	Marble	June 18, 1880	3,500,000	675,500.00	500	96.50
Société Anonyme Russo-Belge	Brussels	Machinery	Nov. 10, 1896	1,000,000	193,000.00	250	48.25
La Métallurgique	do	Machinery and railway materials.	Aug. 9, 1880	6,000,000	1,158,000.00	500	96.50
Estampage du Donetz	do	Railway materials	May 22, 1895	1,562,500	301,562.50	500	96.50
Métallurgique du Sud-Oural	Monceau sur Sambre	do	July 15, 1898	6,000,000	1,158,000.00	500	96.50
Métallurgique de Verchny-Dnieprovsk	Brussels	Mineral ore	Oct. 15, 1896	6,000,000	1,158,000.00	500	96.50
Métallurgique d'Odessa	do	Iron and steel	Apr. 13, 1895	1,300,000	250,900.00		
Compagnie Russo-Belge. La Métallurgique du Nord	do	Iron and machinery	May 6, 1898	2,000,000	386,000.00	100	19.30
Métallurgique et Minière du Don-Donetz	do	Cast iron and steel	June 27, 1898	6,000,000	1,158,000.00	600	115.80
Société Internationale de Meunerie et de Panification.	do	Flour mills	June 29, 1896	1,000,000	193,000.00	500	96.50
Société Nouvelle des Mines de l'Andalousie	do	Gold ore	Feb. 8, 1890	2,000,000	386,000.00	500	96.50
Mines du Luxembourg	do	Iron, minerals, and coal	July 19, 1862	5,300,000	1,022,900.00	1,000	193.00
Minière Franco-Belge des Ardennes	do	Minerals	Oct. 5, 1896	1,000,000	193,000.00	250	48.25
Minière et Usine de Piervilliers-Lorraine	do	Iron, cast iron, and steel	July 30, 1898	1,000,000	193,000.00	100	19.30
Moulins et Brasseries de Marchienne-au-Pont	do	Mills and brewery	Dec. 15, 1884	1,200,000	231,600.00	500	96.50
Société Espagnole des Nitramites	do	Explosives	Oct. 24, 1890	1,069,800	206,471.40	100	19.30
Nordstern-Fahrrad-Verken	do	Automobiles and cycles	Aug. 17, 1898	1,000,000	193,000.00	100	19.30
Fonderies et Chantiers Navals de Wiborg	do	Machinery	Dec. 20, 1898	2,800,000	540,400.00	100	19.30
Société Russo-Belge d'Ouvrage Métalliques	do	Metallic works	Mar. 24, 1896	1,000,000	193,000.00	100	19.30
Société Italo-Belge de Panification	do	Bread making	May 21, 1898	2,000,000	386,000.00	500	96.50
Compagnie Générale de Panification	do	do	Oct. 27, 1896	1,500,000	289,500.00	100	19.30

Principal trade combinations in the consular district of Brussels, Belgium—Continued.

Corporation name.	Locality.	Industry.	Date of organization.	Capital.		Valuation of stocks.	
				Francs.	United States equivalent.	Francs.	United States equivalent.
Panmétalophile	Brussels	Paper making	May 12, 1897	1,000,000	$193,000.00	100	$19.30
Papeteries de Gastuche	do	do	Nov. 15, 1879	1,500,000	289,500.00	250	48.25
Papeteries de Saventhem	Saventhem	do	Feb. 12, 1880	1,220,000	235,460.00	500	96.50
Papeteries de Virginal	Brussels	do	Apr. 30, 1885	1,500,000	289,500.00	100	19.30
Compagnie Austro-Belge de Pétrole	do	Petroleum	July 20, 1896	6,250,000	1,206,250.00	500	96.50
Pétroles de Binagady	do	do	Oct. 19, 1898	2,300,000	443,900.00	500	96.50
Société Belge-Hollandaise des Pétroles	do	do	Nov. 10, 1888	2,000,000	386,000.00	500	96.50
Société des Pétroles de Galicie	do	do	Apr. 27, 1896	2,500,000	482,500.00	250	48.25
Pétroles de Grosnyi (Russie)	do	do	Oct. 12, 1895	8,000,000	1,544,000.00	500	96.50
Société des Pétroles de Ropianka-Barwinck	do	do	Sept. 30, 1896	2,500,000	482,500.00	500	96.50
Compagnie du Pétrole des Andes (Sud-Amérique)	do	do	Mar. 14, 1896	3,750,000	723,750.00	100	19.30
Société Belge des Pétroles du Canada	do	do	Aug. 30, 1894	10,000,000	1,930,000.00	500	96.50
Phosphates de la Malogne	Cuesmes	Phosphates	Apr. 3, 1898	2,025,000	390,825.00	250	48.25
Phosphates du Cambrésis	Brussels	do	Feb. 1, 1889	1,000,000	193,000.00	125	24.12
Compagnie Russo-Belge des Produits Céramiques	do	Pipe clay and pipes	Sept. 17, 1898	2,750,000	530,750.00	250	48.25
Produits Céramiques de Baudour	Baudour	Chinaware	Oct. 17, 1898	1,100,000	212,300.00	250	48.25
Produits Chimiques d'Auvelais	Auvelais	Chemical products	May 29, 1889	1,200,000	231,600.00	500	96.50
Produits Chimiques de Droogenbosch-lez-Ruysbroeck.	Droogenbosch	do	Jan. 31, 1877	1,537,000	296,641.00	500	96.50
Produits Chimiques de Schoonaerde	Brussels	do	Nov. 7, 1896	2,000,000	386,000.00	5,000	965.00
Produits Chimiques et Huileries d'Odessa	do	do	July 30, 1896	4,000,000	772,000.00	500	96.50
Compagnie des Produits du Congo	do	Colonial commerce	Nov. 29, 1889	1,200,000	231,600.00	500	96.50
Société Générale Produits Céramiques	Morialmé	Fire clay	Dec. 17, 1895	1,250,000	241,250.00	250	48.25
Produits Réfractaires de Wladzimirowka	Brussels	do	Feb. 15, 1896	1,000,000	193,000.00	500	96.50
Produits Végétaux de Kassaï	do	Rubber	Mar. 26, 1894	1,250,000	241,250.00	50	9.65
Syndicat International des Producteurs de Glycérine.	do	Glycerin	May 8, 1897	4,500,000	868,500.00	1,000	193.00
Providence Russe à Marioupol	Marchienne au Pont	Mines and quarries	Nov. 22, 1897	15,000,000	2,895,000.00	1,000	193.00
Raffinerie et Distillerie de l'Urugay	Brussels	Sugar	Mar. 3, 1896	3,000,000	579,000.00	100	19.30
Raffinerie Privilégiée du Portugal	do	do	July 27, 1896	1,000,000	193,000.00	100	19.30
La Royale	Châtelineau	Mills	June 21, 1890	1,000,000	193,000.00	500	96.50
Service des Eaux	Brussels	Water and lighting	Apr. 4, 1893	1,500,000	289,500.00	250	18.25
Blarchissement et Impression des Tissus	do	Bleaching, printing, and preparing tissues.	Aug. 12, 1895	1,500,000	289,500.00	500	96.50
Tannerie et Maroquinerie Belge	Saventhem	Tannery and morocco	Dec. 30, 1876	2,500,000	482,500.00	....	....
Compagnie Belge des Téléphones Bell	Brussels	Telephone	Aug. 22, 1881	3,400,000	656,200.00	250	48.25
Société Internationale du Gaz d'Eau	do	Lighting and heating	Dec. 22, 1898	1,100,000	212,300.00	100	19.30
Matériel et Installation Electrique (G. Boty)	do	do	Dec. 20, 1898	1,000,000	193,000.00	250	18.25
Uncon des Papeteries Belges	do	Paper	Sept. 30, 1890	5,000,000	965,000.00	100	19.30
Usines Bonehill	Marchienne au Pont	Cast iron and steel	June 27, 1891	3,000,000	579,000.00	500	96.50
Fonderies de La Louvière	La Louvière	Railway material	Apr. 19, 1879	1,000,000	193,000.00	500	96.50
Usines de Braine-le-Comte	Braine le Comte	do	Dec. 29, 1893	1,200,000	231,600.00	250	48.25
Usines du Phénix	Châtelineau	Iron and steel	Mar. 1, 1875	1,000,000	193,000.00	1,000	193.00

Anciennes Usines Georges de Coninck	Dieghem	Paper and cardboard	June 1, 1896	1,000,000	193,000.00	1,000	193.00
Société Anonyme des Usines Remy	Louvain	Starch	Dec. 12, 1887	1,400,000	270,200.00	350	67.55
Usines Watelar-Francy	Brussels	Chains and materials for railways.	Jan. 8, 1898	1,250,000	241,250.00	100	19.30
Charbonnayes de Marchienne-au-Pont	Marchienne au Pont	Coal	Dec. 30, 1884	2,500,000	482,500.00		
Verreries Belges	Jumet	Window glass and bottles	Mar. 26, 1898	1,000,000	193,000.00	100	19.30
Verreries Bennert & Bivort	do	Glass	Dec. 31, 1892	1,250,000	241,250.00	250	48.25
Verreries de Charleroi	Gilly	Window glass and glassware	Nov. 20, 1872	1,250,000	241,250.00	500	96.50
Verreries de Jumet	Jumet	Window glass	Jan. 27, 1894	1,150,000	221,950.00	500	96.50
Verreries de Radom	Brussels	Bottles	Jan. 15, 1898	1,600,000	308,800.00	250	48.25
Verreries de Rakitno	do	do	Apr. 19, 1898	1,200,000	231,600.00	250	48.25
Verreries de Hamendes, L. Lambert	Jumet	Plate and window glass	July 18, 1896	1,000,000	193,000.00	500	96.50
Verreries du Donetz	Brussels	Window glass	Sept. 14, 1895	5,000,000	965,000.00	250	48.25
Société Anonyme de Vezin-Aulnoye	Huy	Iron and cast iron	Nov. 10, 1858	7,500,000	1,447,500.00	500	96.50
Société Métallurgique de Sambre et Moselle	Montigny sur Sambre	Foundries and coke ovens	Dec. 27, 1898	16,000,000	3,088,000.00	500	96.50
Grande Distillerie du Centre	Brussels	Distillery	Dec. 28, 1898	1,000,000	193,000.00	100	19.30
Verreries de l'Étoile	Marchienne au Pont	Plate and window glass	Jan. 5, 1899	1,052,000	203,036.00	250	48.25
Syndicat International des Glaces	Charleroi	Plate glass	Mar. 15, 1900				
Société Anonyme du Syndicat des Cokes	Bracquegnies	Coke	April, 1900	1,500,000	289,500.00		

REPORT FROM CONSULAR AGENCY AT CHARLEROI.

There are no trusts in this district such as exist in the United States. The manufacturers agree not to raise or lower prices without mutual consent, but there is no financial bond. I find only two exceptions to this rule—the plate-glass and the coke trusts. On the 15th of March, 1900, an agreement was entered into between the plate-glass manufacturers of Belgium, France, and Germany, for a new term of one year, to raise the price of plate glass and regulate its production. They have raised the price from 30 to 40 per cent. It is thought the buyers will resist the present prices and buy only what they are obliged to; but the trust says the production will be reduced if the price does not remain normal. They have no printed statement of their affairs and refuse to give any verbal statement of capital employed, wages paid, or any other matter relating to their business.

The coke trust has its central office at Bracquegnies.

J. Fisher Reese,
Consular Agent.

Charleroi, *May 4, 1900.*

COKE TRUST IN BELGIUM.

The blast furnace associations of Belgium have recently organized a coke trust with a capital of 1,500,000 francs ($289,500). It is composed of the following important foundries: Thy-le-Château, Sud-de-Châtelineau, Bonehill, Couillet, La Louvière et Monceau, in the Charleroi district; Cockerill, Angleur (Sclessin), et l'Espérance, in the Liége district; Athus, Halanzy, Musson, in Luxembourg. Mr. Chantraine has been appointed director of the trust. It is intended to build 151 ovens at Willebroeck, near Brussels, to be lighted January 1, 1901, and the annual production is expected to reach 150,000 tons. Belgian coal, as well as coal from all other countries, will be used by the trust. Each contracting party will have the right to take 500 to 2,500 tons per month. The iron manufacturers forming this trust say they could no longer accept the conditions of the coke syndicate, which not only considerably increased its prices, but forced consumers to make contracts months in advance, and furnished insufficient supply.

The result of this new enterprise will be watched with considerable interest in this country.

Geo. W. Roosevelt, *Consul.*

Brussels, *April 18, 1900.*

GHENT.

Consul Le Bert reports, under date of May 3, 1900, that after careful inquiry and investigation, he is unable to learn of any trust or combination for manufacturing or commercial purposes existing or contemplated in his consular district.

LIÉGE.

I find it exceedingly difficult to secure reliable information regarding trusts and trade combines; they keep their business methods secret, because of the general prejudice that exists against them as well as the disposition of the Government to regulate them. However, after a thorough investigation of the matter, I have ascertained that trade combinations do exist in Belgium, but not trusts, as they are known in the United States. These combinations are organized principally for the purpose of regulating prices. So far as I am informed, there are but four incorporated in this part of Belgium, and these with a nominal capital in each case. This stock is apportioned to the different corporations interested, and the proceeds are used to equip the head office. No dividend is ever declared on this stock.

These combines have nothing to say regarding the output of the different plants, further than to regulate the prices and to assist in distributing the orders among the corporations. I could not learn that they took any part in the regulation of wages. The managements of the different companies are in no way molested further than being required to make a monthly report to headquarters covering the output and sales for the month. These figures I found it impossible to secure in any case, as well as those of the men employed and the capital invested. They are very close combinations, publishing no prospectuses.

The coal combine of the Liége district is known as the Syndicat des Charbonnages Liégeois Société Anonyme, with headquarters at 37 rue de l'Universite, Liége, and branch offices at Verviers, Belgium, Paris, France, and Maestricht, Holland. Its capital stock is 400,000 francs, or $77,200, divided into 400 shares, one-half of which has been paid in, the balance being subject to the orders of the directors. This stock has been apportioned among the 31 coal-mine owners belonging to the combine, out of the 41 mines in this basin. These 31 coal mines represent an actual investment of many million francs. I could not ascertain the capital represented by each company, or the aggregate capital invested. The prejudice against this combine is such that the coal mines on the outside obtain in some cases 2 and 3 francs more per ton for certain kinds of coal than the price fixed by the combine. The latter is so strong, however, that in connection with the other coal unions of Belgium it was able to secure a yearly contract to furnish coal to the Government for railways and other public uses at an advance of 1 franc per ton over the prices ruling at the time. Formerly it was customary to allow a discount of 2½ per cent on carload lots, but now the combine retains this discount to pay office expenses and the salaries of the officers.

The owners of six of the stone quarries of this consular district are organized under the name of the Maitres Carriers de Sprimont, this being known to the public as an association for the insurance of the workmen employed and a mutual assistance company. The offices are in a café conducted by the association, which represents the entire paid-up capital of the combine, some 2,000 francs ($386). Each member pays into the treasury of the combine 2 or 3 francs (38.6 or 57.9 cents) per cubic meter (35.3 cubic feet) for all stone sold. This fund can be divided only when it has reached 100,000 francs ($19,300), and in case a member violates the agreement he forfeits all claim to the fund and is expelled from the combine.

A syndicate of the mirror manufacturers of Belgium was formed in 1892 and was renewed for a term of years on the 15th of March, 1900. The object of the association is to control the output and regulate the sale of mirrors. The deposit of a certain sum—I was not able to learn the figures—is required of each member. The syndicate succeeds well, since it is an important factor in the regulation of prices, and makes itself felt in many countries.

The sugar interests of the country have two organizations that are important, but are not well understood, since an effort is made to keep the public in ignorance of the whole matter.

The producers of raw sugar have entered into an understanding regarding the price to be paid for sugar beets, raised principally by the small truck farmers. They are also organized in their dealings with the Government, to which they pay each year 6,000,000 francs, or $1,158,000, as an internal-revenue tax. The union has no capital and no fines are imposed. The members are simply put on their honor to carry out the agreement.

The sugar refiners are in a combine to regulate prices. This agreement comes to an end this year, and it was impossible for me to ascertain whether it would be renewed or not.

It seems to be the general impression here that these trade combines are not detrimental to the interests of the workingmen, but, on the contrary, to their advantage, since they guarantee good prices for products, regulate the output, and insure more regular employment. There has been an increase in wages to the laborers engaged in the combined industries during the past three years. This increase is scarcely equal to the advance in prices, but the condition of the laboring classes is generally conceded to be better.

ALFRED A. WINSLOW, *Consul.*

LIÉGE, *May 28, 1900.*

FRANCE.

CALAIS.

The organization of trusts in France is prohibited by law. Sections 419 and 420 of the criminal code provide a penalty of fine and imprisonment for this class of offenses. Notwithstanding this criminal statute, the proprietors of some large manufacturing interests are suspected of forming agreements among themselves to sell the products of their respective concerns to one individual, who will sell at fixed prices. The quantity to be supplied by each concern is also agreed upon in advance. Of course this is in violation of law, but it is difficult to prove.

The organization of limited corporations is not as widely practiced in this part of France as it is in England and the United States.

I have made extensive inquiries in Calais and Boulogne-sur-Mer and have learned of no such combinations. Those whom I have asked seem to have heard of trusts in England and America, but never in France except as above stated.

J. B. MILNER, *Consul.*

CALAIS, *May 23, 1900.*

HAVRE.

In France, as in other countries, there is an increasing tendency toward the concentration of capital and the organization of large industrial, financial, and commercial corporations; but of all the great producing nations France has the least number of what are usually called "trusts."

This economic condition may be due to the fact that the agricultural, industrial, and commercial properties are extremely divided, to the existing laws against the formation of corners, pools, etc., and to the conservative nature of the people.

The statistics of the professions as given in the census of 1896 are not as yet available, but as the population of France has not materially changed since 1891, the data of the census taken in the latter year will be sufficiently accurate in showing conditions as they exist at present. In 1891, there were in France 7,671,400 employers, 7,104,900 mechanics (ouvriers), 899,100 clerks (employees), 1,609,400 domestics (serviteurs), and 1,514,100 persons whose callings were unknown.

The mechanics, clerks, and servants numbered 9,613,400 and the employers 7,671,400, or, on an average, only 125 mechanics, clerks, and servants to every 100 employers, which indicates to what an extent the agricultural, industrial, and commercial properties are divided in France.

LAWS.

In the past, legislation has severely punished those who made themselves masters of the stocks of certain merchandise and who took advantage of the scarcity they had created in raising the prices. The most ancient French law against industrial or commercial combinations is found in the acts of Charlemagne, since which period at different epochs royal ordinances and parliamentary decrees have been issued against the "accapareurs." Sully abolished all these decrees, but after his death they were again established under Louis XIII and Louis XIV.

A decree issued by the convention August 26–28, 1793, defined the meaning of the word "accaparement" as "the withdrawal of merchandise or commodities of prime necessity from circulation and holding them in any place whatever without placing them daily and publicly on sale or in voluntarily letting them spoil." This decree had reference especially to grain. The punishment was death. Two or three times under the reign of terror the extreme penalty was inflicted. It is said that this law has never been repealed and is still on the statutes. Under Napoleon I, the penal code of France was adopted. Articles 419 and 420 of this code are those which are to-day applied against the formation of unlawful trade combinations. They are as follows:

ART. 419. All those who intentionally, by circulating false and calumnious rumors among the public, by the offering of a higher price for a product than that which is asked by the sellers themselves, by the union or coalition of the principal holders of the same kind of merchandise agreeing not to sell or to sell only at a certain price, or who by any fraudulent ways or means whatever shall cause the advance or depreciation in the price of merchandise, commodities, stocks, and public securities above or below the prices established by the natural and free competition of commerce, are liable to a punishment by an imprisonment of not less than one month and not exceeding one year and a fine of from 500 francs ($96.50) to 10,000 francs ($1,930).

Those found guilty of said offenses may by judgment of the court be placed under police surveillance during not less than two nor more than five years.

ART. 420. If such operations as described above are practiced upon grain, flour, farinaceous products, bread, wine, and all other drinks, the penalty will be an imprisonment of not less than two months and not exceeding two years and a fine of from 1,000 francs ($193.50) to 20,000 francs ($3,870). A police surveillance also may be ordered, lasting not less than five years and not more than ten years.

On October 23, 1852, a decree was issued forbidding any combination of those holding coal concessions without the authority of the Government.

On January 19, 1871, during the siege of Paris, the Defense Nationale issued an edict threatening with heavy punishment all those who were holding wheat or flour who did not declare within a certain period the quantities in their possession, but it was withdrawn two days after.

The articles 419 and 420 of the penal code given above, called the law of "accaparement," are those under which unlawful industrial and economic combinations are prosecuted, but it is found difficult even for the jurisconsult himself to determine the line of demarcation between prohibited combinations and those which are lawful.

In 1888 and 1889, when Mr. Secretan endeavored to corner the world's copper market, he was convicted and punished under the provisions of article 419. The Société des Métaux and the Comptoir d'Escompte, with which Mr. Secretan was associated, were released from all the contracts they had made with the English and American copper-mining companies, as these contracts were considered by the court an attack on the liberty of commerce.

On the other hand, the syndicate of phosphates of the Department of the Somme has been decided legal by the Seine tribunal of commerce November 10, 1890, and by the cour de Paris April 14, 1891, and the cour de cassation, the court of highest appeal in France, has rejected the appeal which was made from the above decisions.

The latter court at various dates—viz, December 24, 1812, February 1, 1834, May 29, 1840, and April 9, 1863—has decided that article 419 was applicable only when the rise and fall of prices had been brought about by fraudulent means or by coalition.

NUMBER OF SYNDICATES.

In 1897, there were in France no less than 5,680 industrial, commercial, and agricultural syndicates, embracing a membership of 1,061,920 persons, besides numerous comptoirs and chambres syndicales; but there are very few combinations which could be compared with the numerous trusts which exist in the United States or with the great Rhenish-Westphalian coal trust in Germany.

In the silk-spinning industry, for instance, several houses have combined to form one principal house. The latter is strong and wields considerable influence in the industry, but can not be considered as a trust, as there are numerous other important isolated concerns.

Sugar refining is in the hands of a few powerful refineries, which, by agreement, control the production, sale, and prices of sugar. It is very difficult, however, to get accurate information as to the extent of the operations.

BORAX.

The borax industry of France may be said to be in the hands of a trust, as the principal company in France dealing in that article, "La Société Lyonnaise des Mines et Usines de Borax," has recently become a part of the English borax trust, the "Borax Consolidated Company."

The French company brings to the trust its borax mines of Vilayet of Khudavendghan (Asia Minor), near the port of Panderma, Sea of

Marmora, with a concession from the Turkish Government for ninety-nine years from October 1, 1899, the superficial area being 2,440,000 square meters (26,263,888 square feet); the deposits of Karassi (Asia Minor), with a concession from the Turkish Government for fifty years from June, 1897; and their three refineries, one at Maisons-Lafitte, near Paris, one at Lyons, and one at Vienna.

The French company is now liquidating, a legal notice to that effect having appeared in one of the Lyons papers of December 6, 1899. The bondholders are informed that their bonds will be paid after January 2, 1900, at the rate of 100 francs ($19.30) per bond, plus the coupon of interest maturing January 1, 1900, a total of 104 francs ($20.04), upon the presentation of the bonds for cancellation.

The holders of the bonds of the French company had the option of exchanging them for the 4½ per cent bonds of the Borax Consolidated Company, provided the demand was made at the London office of the company before the 16th of December, 1899.

The trust bonds are a first mortgage on the present or future property of the consolidated company. They bear an interest of 4½ per cent payable every six months, on January 1 and July 1, ½ per cent more than the interest of the French bonds, and are payable at par beginning in 1960; or, in case of anticipated amortization, beginning January 1, 1900, at a price of 110 per cent, that is, with a premium of 10 per cent.

Mr. Francis Laur, former deputy from Paris, to whose interesting book on trusts[1] I am indebted for part of the information contained in this report, has presented a petition to the French Parliament protesting against the borax trust. He asks that the proper ministers of the Government shall act to the extent of their power in preventing the operation of the trust in France, and that the Parliament shall seriously study the question of trusts in order that effective laws may be enacted against unlawful combinations, which more and more are menacing the industries.

The committee of the Chamber of Deputies, to which the petition was referred, reported as follows:

> The Chamber has already heard the reiterated complaints of the vine growers against the cornering of sulphate of copper by the sulphur manufacturers, and it is certain that if in the particular case reported by Mr. F. Laur it is difficult to determine what should be the governmental action, it is none the less absolutely necessary and urgent to call the attention of the Government and of the Chamber to this grave question, which demands a prompt remedy. For this reason, the committee is of the opinion that the petition of Mr. F. Laur shall be referred to the president of the council, for his action.

The petition has been sent to the president of the council, but up to the present time there has been no report made.

PETROLEUM.

In France, as in the United States, the production and sale of refined petroleum are in the hands of a powerful organization. The following information regarding the petroleum syndicate has been obtained from authentic sources, and may be regarded as accurate: The coalition of the petroleum refineries in France dates back to about the year 1888. It was originally formed by the three principal refiners of Paris, namely, Fenaille & Despaux, Desmarais Frères, and Deutsch & ses Fils. These refiners formed themselves into a syndicate in order to monopolize the French petroleum industry, and to control the market for refined petroleum by preventing the importation of the American article in a refined state.

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[1] "De l'Accaparement." Francis Laur. Published by La Société Anonyme des Publications Scientifiques et Industrielles. Paris.

By virtue of the protective customs duty on crude petroleum in France, which gives the French refiners a benefit of 7 francs ($1.35) per 100 kilograms (220 pounds) upon the refined article, their syndicate enjoys a monopoly which yields them great profits.

Once united, the three firms named set about completing the syndicate by taking in other refiners of northern and southern France, about ten in all. The importance of a syndicate was demonstrated to the outside refiners. The conditions were stipulated and a uniform price established, to be maintained or modified at the weekly meetings of the members of the original syndicate in Paris, who also put a limit to the production of each refinery. Each firm forming part of the syndicate agreed not to sell under the prices fixed upon. The result was that all the smaller refiners, appreciating the advantages of the monopoly, enrolled themselves, and the trust was put on a firm footing.

The syndicate then entered into a contract with the Standard Oil Company of the United States, by which the latter was to deliver oil to no other person, firm, or syndicate in France.

A contract was also made with the house of André & Co., which had the monopoly of the sale in France of Russian petroleum. The firm ceded its monopoly to the syndicate, on condition that it would take a certain quantity of petroleum per annum. An agreement satisfactory to the Standard Oil Company was entered into, and the importation of Russian petroleum was likewise controlled.

From this moment a long series of prosperous business years were enjoyed, and are still enjoyed, by the trust, which fixed its own prices, and crushed out all other importers. Indeed, the great prosperity of the petroleum trust has tempted a number of capitalists to break it, or endeavor to compete with it, but the impossibility of importing petroleum from either the United States or Russia has made competition impossible, and the trust still prospers in spite of several attacks made upon it by members of the Parliament.

As an indication of the volume of the petroleum industry in France, I give below the importations and exportations of crude petroleum for the past three years.

The importations of crude petroleum which went into consumption in France for the last three years, in tons of 1,000 kilograms (2,204.6 pounds), were as follows:

Countries.	1899.	1898.	1897.
	Tons.	*Tons.*	*Tons.*
United States	264,076	267,696	251,801
Russia	55,106	54,984	46,459
Other countries	27	52	21
Total	319,209	322,732	298,281
Value	$5,975,961	$6,046,647	$5,205,346

Importations of refined petroleum.

Countries.	1899.	1898.	1897.
	Gallons.	*Gallons.*	*Gallons.*
United States	5,960,252	5,690,788	5,598,310
Russia	52,840	327,000	48,533
Other countries	676,352	842,163	1,325,188
Total	6,689,444	6,859,951	6,972,031
Value	$570,970	$586,531	$570,428

The exportations of crude petroleum were virtually nil. Those of the refined product were as follows: 926,342 gallons in 1899; 1,054,527 gallons in 1898; and 1,174,395 gallons in 1897.

The price of refined petroleum in Havre, such as is used in dwellings for lighting purposes, is 21.50 francs ($4.15) for 10 cans containing 5 liters (5.28 quarts) each, or 31.4 cents per gallon; if bought by the single can, 36½ cents per gallon; and in car-load lots, in cans, 27¾ cents per gallon.

IRON.

The pig-iron industry of France is virtually controlled by the Comptoir Métallurgique de Longwy, a joint stock company formed originally in 1873, for the purpose of bringing to the attention of consumers of pig iron generally, that which was produced in the eastern part of France. It consisted at first of 4 establishments, having 7 furnaces for making refined iron, and 4 furnaces for producing iron intended for molding purposes, and during the first year sold only 72,000 tons. It now includes nearly all the pig-iron furnaces of the department of the Meurthe-et-Moselle. In 1897, there were 18 concerns belonging to the company whose output in 1896 was 1,251,000 tons, of which 580,000 tons were consumed by themselves in making steel, etc., 466,000 tons were sold in France, and 205,000 tons were exported to foreign countries. The comptoir acts as an intermediary between the consumer and the producer, all sales being made through the company, and not in any case by its individual members. It contracts for the delivery of pig iron, determines the conditions under which the contracts shall be made, and fixes the prices.

The total production of pig iron in France in 1898 was 2,534,000 tons, of which 1,545,000 tons were made in the department of Meurthe-et-Moselle, and 989,000 tons in the rest of France. According to the statistics of the minister of public works, almost all of the iron produced outside of the department of the Meurthe-et-Moselle was either made into steel or transformed into plates, etc., by the establishment which produced it. These include the furnaces of the departments of Gard, of Landes, of the Loire-Inférieure, of the North, of Pas-de-Calais, and of the Saône-et-Loire, whose total production was 697,000 tons, of which only 41,000 tons were sold as pig iron. The furnaces of the Rhône, of Isère, and of the Loire, whose production was 74,000 tons, sold their iron to the steel makers of the Haute-Champagne. It follows that it was the 1,545,000 tons of pig iron produced by the department of the Meurthe-et-Moselle which supplied the wants of the greater part of the pig-iron trade of France. This does not mean that the above amount was sold by the Comptoir de Longwy, as this company does not include in its membership those establishments which transform their pig iron into steel, or which make cast-iron articles. To better understand the importance of the comptoir, the following indicates the division of the pig-iron production of France for the first six months of 1899:

	Tons.
Furnaces outside of the department of the Meurthe-et-Moselle, transforming almost their total production	502,000
Furnaces of the department of the Meurthe-et-Moselle, not belonging to the comptoir, transforming their production into steel, etc	329,000
Furnaces of the department of the Meurthe-et-Moselle, members of the comptoir	456,000
Total	1,287,000

From this, it will be seen that the Comptoir de Longwy exercises a preponderating influence upon the pig-iron market of France.

The comptoir, by taking advantage of the geographical position of its members, can place its orders for iron so as to reduce the amount to be paid for freight to a minimum. All the sales being made through the comptoir, the cost of selling has been reduced to 15 centimes (2.9 cents) from 20 centimes (3.9 cents) per ton.

The general method of selling the iron is by sliding-scale contracts of from three to five years, based upon the average cost of coke used by the furnaces. As an example, suppose the comptoir has contracted with a consumer to furnish 36,000 tons of pig iron of a certain grade in three years, with average monthly deliveries of 1,000 tons. The price agreed upon is 51.50 francs ($9.94) per ton, when the average cost of coke is 21 francs ($4.05) per ton. If the price of the coke advances 1 franc (19.3 cents), it is agreed that the price of iron shall be increased 1.25 francs (24.1 cents); on the other hand, if the price of coke falls 1 franc, the price of iron will be lowered 1.25 francs.

Every month, the average cost of coke is determined after receiving estimates of the cost of coke used by the different members of the company. This price is published for the benefit of the consumers. The average cost of coke in July, 1899, was 25.27 francs ($4.88); August, 25.51 francs ($4.92); September, 25.51 francs ($4.92); October, 25.55 francs ($4.93), and November, 25.77 francs ($4.97). Invoices are sent with each delivery, approximating the current price of iron, and at the end of every six months a corrected invoice is rendered, giving the actual prices, based upon the average cost of coke, and upon which the account must be settled.

At the present time, the price of iron having increased enormously, the customers of the Comptoir de Longwy are reaping much benefit from the contracts made before the rise. Longwy pig iron in the open market, in June last, was quoted at 110 francs ($21.23) per 1,000 kilograms (2,204.6 pounds), while the contract prices for iron for refining was 67.83 francs ($13.09) per 1,000 kilograms, and 80.20 francs ($15.48) for casting iron.

The success of the Comptoir Métallurgique de Longwy has led to the formation of other similar companies, the Comptoir des Aciers (steel makers), Comptoir des Poutrelles (beams), Comptoir des Tôles et Larges Plats (sheet iron and plates), and the Comptoir des Ressorts de Carrosserie (wagon springs).

The Comptoir des Aciers is composed of 5 large steel manufacturers, who do not transform into rails or beams their entire steel production. The most of these formerly belonged to the Comptoir Métallurgique de Longwy, but have recently withdrawn from the latter company, as they consume all their pig iron output for their own uses.

According to the annuaire of the minister of public works, the Comptoir des Poutrelles is a company formed for the purpose of selling the entire output of small beams, U and T iron of all dimensions, produced by the 22 principal rolling mills of France.

The Comptoir des Tôles et Larges Plats, according to the same authority, is composed of 8 establishments, and the Comptoir des Ressorts de Carrosserie also of 8 manufactories.

I am indebted to M. Georges Villain, a French writer on economic subjects, for most of the information relating to the "comptoirs" contained in this report.

A. M. Thackara, *Consul.*

Havre, *July 19, 1900.*

LYONS.

The subject of trusts or business combinations has attracted little attention in France, The political, economic, and semiliterary publications of this country have contained many articles on these business combinations, but they all refer to organizations outside of France, mainly [illegible]. England and the United States, and are based upon articles in American newspapers. A number of Lyonnaise business men have assured me that there are no trusts in France. In this country, the existing commercial combinations attract no attention in the press. Political parties, absorbed in the discussion of republicanism, monarchy, clericalism, and Free Masonry, have never yet attempted to make an issue of the business methods of men or firms. A prominent lawyer of whom I sought information expressed the opinion that trade combinations are the inevitable outgrowth of highly refined industrial and commercial development; that they proceed from the same trend of thought and action that has converted groups of small powers into one great nationality, created national banks and one system of weights and measures where there were formerly many, and that if they are conducive to greater promptness and economy in the transaction of business, the country where they exist must profit by them.

There are a few business combinations in Lyons, but none of much importance. The Eden Bar Association is one. First one saloon keeper bought out his neighbor, and put a man behind the bar. Next he organized a stock company and bought out or established bars until he had fifteen or twenty. The company is stocked at 750,000 francs ($144,750), pays big dividends, and its shares are at a high premium.

Another combination is that of secondhand furniture and bric-a-brac men. Two or three of them drive away other bidders from sales by running up prices whenever a stranger bids for an object of any value. At every sale of old books, paintings, or furniture, an expert in the special articles to be sold is present. After purchasing, he divides his profits with the other parties to the trust. If the contents of an old castle are to be sold anywhere within 50 miles of Lyons, one or more representatives of this trust are present, never bidding against each other, but contriving to discourage and drive off other bidders.

Several combinations of grocers exist, having establishments in different parts of France. There are three in Lyons. They sell groceries, bread, meat, game, poultry, wines, vegetables, pastry, and confectionery at moderate prices, and are very popular except with the dealers with whom they interfere. They have the reputation of selling cheaper than other stores. It is said that the combination system is most advantageous, as it enables the proprietors to work off perishable commodities at just the right time by distributing them in a number of stores.

Firms doing business in France under other than individual names are often called "sociétés anonymes," or joint-stock companies. This name is also applied to combinations which are known as trusts in the United States. The societies of dyers, dressers and printers of fabrics, of undertakers, of spinners of waste, and of hatters are some of these. Their capital is from 1,000,000 to 2,000,000 francs.

The only complaints of these combinations are from individuals in the same line of trade whose interests have been interfered with. Business men, lawyers, and politicians with whom I have talked on this subject ridicule the idea of attempting to control these combinations by law. As they exist in France, they seem to be the natural outgrowth of the free play of commercial and individual enterprise. The smallness of their number in France, Spain, Italy, and Portugal may be attributed to the absence of that active individual initiative which, among Anglo-Saxons, leads men to confer, plan, and combine in the interest of their own and the public welfare. With rare exceptions, the management of interests not purely private is lodged in the church and the state in the countries mentioned.

Mr. Jean L. Duplan, a gentleman who has large interests in France and the United States, and is a counsellor of the chamber of foreign commerce of France, said to me when I questioned him on this subject:

> The influence of these combinations for good or evil depends entirely upon the men who manage them. If well and honestly conducted, I should say they would be of great value to a country. I am told that they secure cheaper production. If that is the case, the country where they exist will be more apt to capture a heavy export trade than the countries where they do not exist. It will be able to give more steady employment to its workingmen. England has more trusts than any other nation, and it has the largest foreign trade.
>
> It seems to me that the expansion of foreign commerce in the United States has followed very closely upon the formation of these combinations. They are nothing more than large partnerships, with increased capacity for filling larger orders upon shorter notice. If they tend to crowd small producers out of business, that is no more than all new inventions have done from the time when the makers of bows and arrows, in an adjoining department, petitioned to the Duke of Burgundy to suppress the manufacture of firearms, as they were not only "inferior to the ashen bow," but deprived a great many poor men of work.
>
> The wealth of a nation in the future must depend very largely upon its foreign trade, and this depends upon cheapness of production. Within the next few decades, China, with its 400,000,000 population, is to be railroaded, its rivers to be dredged, its mines opened, and all its dormant resources developed. It is the greatest latent export market that the world ever saw, and the country which can fill large orders for machinery, rails, locomotives, steel bridges, etc., at the lowest figures and in the shortest time will capture this market and thus supply work to its people.
>
> The American people gave the world a noble object lesson in great combinations over a hundred years ago when they formed their Union, and later, some forty years ago, when they fought four years to maintain it. I consider your Government of forty-five States one great joint-stock company or trust, if you desire to call it that. We once had four or five governments here, where we now have only the one government of the city of Lyons. We have made it a big trust and everyone is well pleased with it, though they revolted against it when it was first proposed, notwithstanding the fact that the several governments had been continually quarreling.

> The same spirit of modern progress that creates these government unions leads to the organization of great commercial and industrial combinations, and both are equally superior to the old divided methods of action.

The above is all I have been able to obtain in the way of opinion and information on the subject of business combinations in France. The first answer prominent business men give on the subject is: "Monsieur, la France n'a pas encore été trustée."

JOHN C. COVERT, *Consul.*

LYONS, *May 8, 1900.*

MARSEILLES.

In spite of stringent legislation directed against the artificial manipulation of prices in France, and a popular conviction that combinations of capital in the nature of trusts are not to be found, I discovered that syndicates have been successfully organized, and in this city are now in more or less undisputed control of the following commodities or utilities: Sugar, rice, sulphur, candles, coal, petroleum, tiles, matches, tobacco, transportation by land, and transportation of immigrants. The control of these matters is not regarded in the light in which it would be in the United States under the same circumstances. Indeed, I have before me a letter from a French business man, at the head and front of many important affairs, who assures me that "the trust, as it is constituted in America, does not exist in France." The Semaphore, a staid commercial reporter for this portion of the Republic, in its issue of May 10, declares:

> Trusts are those associations which have so astonished us in Europe, and which are punished in our codes under the title of "accaparements." The Americans, less scrupulous than ourselves, have given themselves up to vast operations, which at this moment bring confusion to all the economy of the country. * * * The situation which is thus created should inspire our meditation. This new system is susceptible of great development, and of having for us a baneful blow. We have not forgotten that the preceding national election almost closed to us the American market, and that it has been only recently that we have obtained some ameliorations by our tariff treaty (the convention of May 30, 1898). What shall we do in the face of these trusts, which will attempt, without doubt, to control our export markets?

The effect of trusts or trade combinations on the business of this country is not a popular issue, and if the socialistic protests, which are general rather than specific, were excepted, society would be found to be undisturbed by the tendency to form syndicates, or at least inclined to permit them to work out their own destiny. The public is fairly well satisfied with its statutes, which provide penalties against the creation of a monopoly of any product, yet recognize as legitimate the fusion of existing interests, either by combination or sale outright to a new organization. As my legal adviser says: "It becomes less and less easy to encounter the offense of coalition, as foreseen by article 419 (forbidding monopolies), in the actual conditions of trade."

The nature of the industries of France—constituted largely of specialties of infinite variety, and often depending for success upon a mark or family name of long standing, or relying upon other countries for raw materials—is not generally favorable to the formation of trusts on an extensive scale. For the same reason, although the organization of corporations under forms of law has been authorized from time immemorial, it may be said that until within fifteen years these societies were comparatively uncommon, and were usually formed for the exploitation of very large enterprises. As a result of the war with Germany, an industrial "renaissance" manifested itself in that country, largely encouraged by the action of bankers and capitalists, who took control of producing institutions, parceling out stock among individuals and obtaining capital required for their operations. While this revolution was taking place in Germany, the tendency in France on the part of the rich "industriels" was to transmit the business from father to son. Active competition from abroad, the need of additional capital to replace obsolete methods, led to a transformation in the method of doing business in this country, a transformation so gradual as to have been scarcely recognized by the French themselves. The old establishments were transferred to "societies," in which the former owners took their price in stock, and shares were sold upon the market as a means of providing capital to work new plants or improve those existing. A people frugal and saving, always provided with money (kept either in a family cash box or the "caisse d'épargne"), and conservative in the matter of investments to a degree realized in no other country of the world, found many of these opportunities attractive. It has been but a step from this metamorphosis of simple copartnership into corporations to the aggregation in a sole organization of several societies making the same merchandise. I could cite dozens of cases of companies, the extent of whose operations does not raise them to the dignity of "trusts," yet which have been formed by the consolidation of smaller companies.

The law as it stands does not permit the issue of stock of a lower par value than 100 francs ($19.30) by companies whose capital exceeds 200,000 francs, and I am informed that if shares in these companies of a par value of 25 or 50 francs were authorized, large amounts of inert capital would be tempted from present hiding places. In recognition of this fact, a proposition of law is now before the Chamber of Deputies enabling corporations to dispose of shares having a par value as low as 25 francs ($4.82). The corporations are required to publish a semiannual statement, and as an additional measure of protection to individual stockholders, the latter may elect an inspector (who need not be a shareholder himself), clothed with authority to examine at all times the details of administration, whose duty it is to advise the stockholders of the manner in which the responsible directors carry on the business. The people themselves being in a considerable proportion owners of the plants under discussion, are little disposed to complain of their existence, contenting themselves rather with safeguarding the workingman's interest by law. This has been done in part by a law passed in 1899, fixing responsibility for accidents in workshops, providing compulsory insurance, and establishing other regulations. This opens up a question not contemplated in the instructions from the department, and the settlement of which is seriously criticised in France, and is probably open to revision.

This tendency toward commercial centralization manifests itself in many different ways, and frequently in a manner relatively insignificant, but important as indicating the direction of the movement. Thus, in the city of Marseilles, where one of the principal streets is lined on one side by a large number of imposing "cafés," some very profitable, others less so, a transformation is in progress whereby the entire group of "cafés" will be absorbed by a common organization. In the Petit Marseillais of May 4 there is an account of an annual meeting of the "Syndicat Industriel des Débitants de Boissons Gazeuses" (aerated water retailers), according to which this syndicate, which practices socialism in its own way, is very prosperous, and has distributed 12 per cent of the dividends earned among the employees."

An imperceptible progress toward industrial combination is traceable through centuries, as each little hamlet in France, by a process of natural selection, has found some branch of trade especially adapted to local conditions. Thus in Carpentras, the manufacture of bonbons is all important. In Mazargues, the major portion of the women of the village are constantly at work weaving a fiber web of which baskets are made for the transportation of coal and similar merchandise. At Bandol, the men are fishermen and the women make funeral wreaths of immortelles. At Roquefort, everybody is engaged in the manufacture of the famous cheese, the output of which is controlled by a syndicate, which will be mentioned later. This list could be extended indefinitely.

In the most of these cities and villages, syndicates exist, one of employers and one of employees. The organization is often very loose, but is generally present. Thus at Apt, where there are forty or more ocher mines, the proprietors have refused opportunities to form a single company themselves or to sell out to a new company, yet have voluntarily turned over four-fifths of their production to the largest independent firm at an agreed price.[1] The only acknowledged monopolies are those maintained by the State for revenue purposes, and some common carriers, such as the Paris, Lyons and Mediterranean Railway Company, which has an exclusive franchise for the operation of a railway within its territory, and concerning whose high rates and insufficient accommodations the voice of every important commercial body in Marseilles is annually raised in protest. Discrimination in rates is not charged. The Government itself controls the manufacture and sale of tobacco and matches as absolute monopolies, deriving therefrom a revenue, amounting for the year 1899, in the case of tobacco, to about 342,000,000 francs ($66,006,000), and in the case of matches to 22,500,000 francs ($4,342,500). As these two monopolies are maintained for purely revenue purposes, they should perhaps be excluded from further consideration.

CONDITION OF LABOR.

The workman in the meantime has not been idle; his syndicates are as old as those of his employer. I translate from an editorial published in the Sémaphore, the market authority heretofore quoted, on May 8, 1899, the following roseate account of his situation:

> Statistics agree in indicating that in the last fifty years the wages of workmen and pay of domestics have doubled. The expenses are far from having augmented in the same proportion. Rents have more than doubled, it is true, but the price of manufactured products has lowered, as also that of clothing. From which it results that while wages have increased 50 per cent, the expense of living has increased not more than 25 per cent. If one considers that in the same time the revenue of shares has lowered 50 per cent one sees that the workman has benefited from the new economic conditions, and that wages have constantly followed an ascendant progress while revenues have taken an opposite course. This increase in wages has not been

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[1] Since writing the above I learn that a combination of the Vancluse ocher interests is now in process of formation.

the only advantage obtained by the workman; there must be added, in a certain number of industries, subsidies of various sorts, such as gifts outright, premiums for seniority, and participation in profits.

The operatives' picture of existing conditions is less optimistic, as will be seen from the following translation of a letter addressed to me by the secretary of the Bourse du Travail (labor exchange):

> In reply to your various questions concerning the condition of labor I beg to submit to you the following views:
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> (1) Within the last ten years wages have been reduced in notable proportions, while the necessities of life have increased. The cause lies in the substitution of machinery for hand labor, this state of things being a necessary movement in the march of progress, which will continue to be prejudicial to the mass of laborers so long as the very limited portion of the population, the capitalists, derive the only benefits.
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> (2) With very few exceptions, as intimated above, wages have diminished, and work is less abundant.
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> (3) The influence of the syndicates has been profitable to themselves in that they have become masters of markets in many directions, while neither workmen nor consumers have obtained any advantage.
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> (4) The influence of syndicates of laborers has been more satisfactory, the difference between the first and the second being that, while the syndicates of capital have for principle the defense of their direct interests, from which a nonproductive minority derives benefit, the syndicates of workingmen, by their special instruction and their studies, tend to develop their intellect and productive capacity and at the same time maintain the producing class.
>
> (5) The organizations of labor are considered by workingmen themselves as institutions which assure to them more or less the material gratifications of existence. Opposed to these organizations there is but one adversary, the forces of which diminish every day—ignorance. The constitutions of syndicates (combinations of capital or "trusts") are considered perfectly legal, but somewhat restrictive.

The foregoing letter was written in reply to a number of questions, very direct in character, and as may be gathered from the secretary's letter, the element of the population which he represents has not yet come to consider the organization of combinations of capital essentially inimical to the operatives' interest. It is probable also that the secretary takes an extreme view, or at least a merely local view of the wage question. As nearly as I can ascertain from careful inquiries made among employers and employees, the truth lies somewhere between the two opposing statements quoted. My observation is that most strikes of any magnitude within recent years have resulted in some slight advances conceded to employees, which would indicate that the tendency of wages is upward rather than downward, and it is certainly true that at the present moment the manufacturers of France have all that they can do.

THE LAW OF CORPORATIONS AND SYNDICATES.

In the foregoing I have undertaken to explain, in somewhat general terms, the attitude of the people with respect to trade combinations, the fact that such combinations do exist, and have referred to the laws governing questions of this description. In the following I shall give, in its terms, the more important paragraphs of the French code, and such detailed information as I have been able to procure, in the brief period at my disposal, with respect to the trade combinations themselves.

For the protection of the public generally and shareholders particularly, under the terms of article 34 of the law of July 24, 1867, relative to societies, "Every society 'anonyme' is required to prepare, every six months, a statement of its assets and liabilities. This statement is placed at the disposition of the 'commissaires' (inspectors). Moreover, each year there must be established, in conformity with article 9 of the Code of Commerce, an inventory, containing a statement of the value of real and personal property and of all assets and liabilities of the society. The inventory, the financial statement, the account of profits and losses must be placed at the disposition of the 'commissaires' (inspectors) the fortieth day at the latest before the general assembly. They will then be presented to this assembly."

Article 35 of the same law adds: "Fifteen days at the least before the meeting of the general assembly every stockholder can take, at the headquarters of the company, from the inventory and the list of stockholders, and have prepared for himself, a copy of the financial statement, giving the inventory and the report of the 'commissaires.'"

Independent of the provisions contained in article 35, as above stated, and the communication of which at the period therein named is obligatory, the law recognizes that stockholders may gain from the tribunals, in view of some serious interest, authority to obtain information at any period from books, processes, business accounts, and similar documents.

THE LAW AGAINST MONOPOLIZATION.

One guilty of forming a monopoly commits a misdemeanor falling within the provisions of articles 419 and 420 of the Penal Code, which read as follows:

Art. 419: All those who, by the public distribution of falsifications or calumnies, by offers made above the prices demanded by sellers themselves, by union or coalition between the proper holders of the same merchandise or commodity, holding it not for sale, or refusing to sell, except at certain prices, or who by fraudulent ways and means of any description shall have caused a rise or fall in the prices of commodities or of merchandise, or of papers and public effects above or below the prices which natural and free competition of commerce would have determined, shall be punished by an imprisonment of one month at the least, or one year at the most, and payment of a fine of from 500 to 10,000 francs ($96.50 to $1,930). The guilty may be placed by the sentence or the judgment under the surveillance of the higher police during one year at the least and five years at the most.

Art. 420. The penalty will be an imprisonment of two months at the least, and of two years at the most, and a fine of 1,000 to 20,000 francs ($193 to $3,860), if these manipulations have been practiced upon grain, corn, flour, farinaceous substances, bread, wine or other beverage. The surveillance which may be pronounced will be of a duration of five years at the least and of ten years at the most.

INTERPRETATIONS OF THE LAW.

The court of cassation (the highest tribunal in France) has handed down a number of judgments enunciating principles to be considered in connection with article 419, as follows:

Article 419 applies to the coalition of the majority of upholders of a single merchandise, as well as to that of its principal upholders. * * * It applies also to the coalition of manufacturers, as well as to merchants properly speaking. Cassation, August 31, 1838.

This article is not limited to the case of material merchandise. It applies to that which, being the object of the speculations of commerce, has a price habitually determined by the free and natural competition of this traffic. Cassation, May 16, 1845.

Thus the dispositions of the article 419 apply to the manipulations which have for object the increase in the price of transportation by land or by water. Cassation, May 16, 1845.

But article 419 is not applicable to titles issued by industrial or commercial societies not authorized by the Government, which do not come under the head of public effects, nor to merchandise in the sense of this provision. Cassation, July 30, 1885.

Article 419 is applicable, although the coalition may have been directed against only one establishment and has not resulted in the increase or decrease of prices, except in regard to this establishment. Cassation, January 7, 1837.

Moreover, the coalition between the holders of the same merchandise or commodity, with the object of selling only at a certain price, does not suffice to constitute a misdemeanor foreseen by the article 419. This misdemeanor does not exist until the increase or decrease has taken place. Cassation, May 29, 1840.

To the penal provisions of article 419 is added a civil provision which is a nullification of acts contrary to commercial liberty and, in consequence, to public order.

In principle, article 419 of the Penal Code has not been abrogated by the law of May 25, 1864, upon coalitions, nor by the law of March 21, 1884, upon professional syndicates, nor by the law of March 28, 1885, upon markets in futures. The law of May 25, 1864, proclaims the liberty of coalition between employers and employees, but it maintains the misdemeanor relative to speculations bearing upon merchandise, properly speaking, which have for motive stock-jobbing and monopolization.

The law of March 21, 1884, upon professional syndicates, has permitted persons exercising trades or professions having some affinity for each other to syndicate themselves for the study and the defense of their interests, economic, industrial, commercial, or agricultural. From this it results that the law of 1884 will be applicable to all objects that it foresees, without interference from the operations of article 419 of the Penal Code; in other terms, article 419 of the Penal Code will be inapplicable to every coalition which, under the regular form of a syndicate, would constitute a veritable defense of the commercial interests of its members. On the other hand, the coalition foreseen by article 419 continues to-day to be a misdemeanor, not only for the holders of the merchandise not syndicated, but even for the syndicate which allies itself with other holders of the same merchandise under the terms of article 419. This has been so determined by the court of Paris, on February 28, 1888, in the case of the principal holders of mineral waters in that city, who, constituted as a syndicate in the terms of the law of 1884, had as a result of an understanding between themselves and the proprietors of several springs of mineral water, forced one of their competitors to pay more dearly for certain waters, or to procure them through irregular channels, which had augmented the price before reselling. The circumstance, not entering into the objects laid down in the law of 1884, received the application of article 419.

Finally, the law of March 28, 1885, recognizes as legal dealing in futures, or dealing when the settlement is effected by the payment of simple differences. It shelters them from the exception against gaming and abrogates articles 421 and 422 of the Penal Code. It does not abrogate article 419. The object was only to prevent speculators of bad faith from freeing themselves from their engagements. The law has not authorized stock-jobbing and monopolization, as foreseen in article 419.

One can say, however, in conclusion, that the misdemeanor of coalition, such as article 419 has foreseen and defined, is less and less easy to encounter in actual conditions of trade.

In most of the French combinations, always excepting the Government and railway monopolies, a semblance of independence is maintained, although the object is invariably to regulate prices and reduce expenses. Even the petroleum trade, controlled by the American Standard Oil Company, manifests some external symptoms of independence. In practice, it is found that the Republic is divided into territory, and that dealers do not go beyond their assigned field.

THE SUGAR COMBINATION.

The most important of the trade combinations of the country is that existing between the sugar refiners. I am informed that they, in their turn, are in a manner controlled by Mr. Czarnikow, a great sugar broker in London, who holds the Dutch sugar trade in the hollow of his hand, and through it the European refineries generally. A Marseilles broker tells me that he has among his effects a letter from a firm to which he had offered sugar on terms more favorable than those of Mr. Czarnikow, and which declined against its will, on the ground that to do so would subject it to the powerful broker's ill feeling and a refusal to recognize it for one year, that being his method of punishment at that time. The enlargement of the raw-sugar areas which supply European refineries has somewhat diminished this London merchant's power. The French refiners operate through a pool which fixes prices. The added cost of transportation naturally confines each refiner to a restricted radius of operation, and the practical effect of the pool is to make refiners independent within geographical limits. These limits are not laid down by contract. The output of each refinery is restricted in proportion to its producing capacity. The export trade also is proportionately divided. The Government pays bounties at the rate of 3.60 francs (69 cents) per 100 kilos (220 pounds), but limits this bounty to a total exportation per annum of 300,000 tons. The sum of $1,930,000 is thus annually contributed to the trade by the Government, and the total is distributed equitably among the refining companies, whose exportations do not go beyond the maximum upon which bounty is paid.

The average prevailing wholesale prices for loaf sugar for French consumption range from 100 francs ($19.30) to 110 francs ($21.23) per 100 kilos (from 8.8 to 9½ cents per pound), these prices comprising all Government charges. The duty or revenue tax collected by the Government amounts to 69 francs ($13.31) per 100 kilos, from which about $38,600,000 per annum are realized by the State. The price of sugar out of bond for export ranges from 32 francs ($6.17) to 38 francs ($7.33) per 100 kilos. The present legislation has been in force since 1893. In previous years, the duty was placed upon raw sugar on the basis of its saccharine properties and richness, and since the war of 1870 the taxation has about doubled, being now at its highest point. The trade in France includes the following refineries: Messieurs Lebaudy Frères, Paris, capital 40,000,000 to 50,000,000 francs ($7,720,000 to $9,650,000), no official capital declared; Société des Raffineries et Sucrerie Say, Paris, capital 50,000,000 francs ($9,650,000); Raffinerie de Chantenay, Paris, capital 2,400,000 francs ($463,200); Société Anonyme des Raffineries Parisiennes, Paris (mills at St. Ouen), capital 12,000,000 francs ($2,316,000); Messieurs A. Sommier et Cie., Paris, capital 11,000,000 francs ($2,123,000); Raffinerie de Sucre de St.

Louis, Marseille, capital 6,000,000 francs ($1,158,000); Société Nouvelle des Raffineries de la Méditerranée, Marseille, capital 4,500,000 francs ($868,500), Société Anonyme de la Sucrerie, Raffinerie de Châlon-sur-Saône, capital 875,000 francs ($168,875).

THE SULPHUR SYNDICATE.

The sulphur business of Marseille is controlled by the Raffineries de Sulfure Réunies, 1 Place de la Bourse. This is a wheel within a wheel. It is a company composed of the various sulphur-refining companies, and buys the raw sulphur, selling it to its constituent companies, and buying back from them the refined product at an agreed price and then selling upon the market. Thus all companies are placed upon the same basis, profits being divided at the end of the year. The refiners are all under contract to keep out of the market themselves. Buyers procure any mark they desire, and thus the several refining companies retain their identity to a degree.

ROOF AND FLOOR TILE COMBINATIONS.

There are two tile combinations with headquarters in this city, one controlling the roofing tiles, which are used exclusively for buildings in this country and are largely exported, and the other manufacturing the octagonal and square floor tiles extensively used in France. The former business is one of the most successful in the country. Its title is the "Société des Tuileries de Marseille," with office headquarters at 4 Place Saint Férréol. The capital of the company is comparatively small. The stock is held by a score of tile manufacturing firms, who sell their product to the general company at an agreed price, which gives them a very small margin of profit. The buying company disposes of the product upon the best possible terms. This concern has been in successful existence for a number of years and I have not been able to learn that its organization has resulted in any change in wage conditions. The constituent members of the company are: Société Générale des Tuileries de Marseille, Arnaud Etienne & Co., J. Daudé, Roux frères, Saumati frères, Fabrique la Plata, Guichard & Cie, Pierre Sacoman, Guichard frères, Guichard, Carvin & Co., Tuileries de la Méditerranée, Amédée Pierre, Le Fils de Jules Bonnet, Lançon Pierre, Fenouil Bmy., Roux Jean Bte. Martin, Carvin fils, Pradel frères, Brest frères.

The organization of the floor-tile manufacturers is of recent date, and the success of the enterprise has not been fully assured. The company is known as the Société Générale des Tomettes et Céramiques de Salernes" and its capital is 2,500,000 francs ($482,300). From the administrator I learn that the combination owns outright 55 factories, located at Salernes, Lorgues, Vidauban, Brignoles, and Draguignan. This company is identical with an American trust, as popularly understood, as the various properties have been purchased outright by a new company, payments being made partly in cash, partly in stock, and partly in bonds. I am indebted to the administrator for a very frank statement of the object of the organization, which was extensively advertised in its early stages as designed to combine a vast number of small concerns and obtain the benefit which would naturally result from one office administration. Improved methods of manufacture are also proposed.

THE BRITISH COAL POOL.

The bunker coal trade of Marseilles is directed by four firms, who require no organization and content themselves with an annual contract. I refer to the business in British coal exclusively, of which over 400,000 tons are sold annually, this being preferred by the most important navigating companies. The firms forming this trust agree upon the contract price at which they will sell to their customers through the year, and navigation companies which do not take the pains to make a contract are obliged to buy coal in Marseilles at the ruling market prices. Under these conditions, it has been true for months that these four firms have been selling coal under contract to steamship companies at 25 shillings ($6.08) per ton which actually cost them from 10 to 15 shillings ($2.43 to $2.90) in excess of that price. The good years are counted upon to balance the bad ones, and the four parties to the contract are reasonably well satisfied with the success of their experiment.

THE IMMIGRANT POOL.

The steamship companies carrying emigrants from the Mediterranean to New York have formed a pool within the last twelve months, consisting of the Anchor Line, Prince Line, Navigazione General Italiano, and the Cyprien Fabre Company, whereby the price of 170 lire (about $32.81) is charged for steerage passages, as against a fluctuating price, dependent upon competition, which ranged from 80 lire ($15.44) to 160 lire ($30.88). I have been unable to obtain all the details with respect to this pool, but I am perfectly satisfied that the entire immigrant business between Europe and American ports is thoroughly regulated by various companies operating within certain spheres, and not interfering with each other in any respect.

ROQUEFORT CHEESE TRUST.

One of the strongest trusts in this country is the "Société des Caves des Producteurs Réunis de Roquefort." This company has a capital of $1,254,500, and manufactures annually 8,818,400 pounds of the famous Roquefort cheese, known all over the world. In former years, this cheese was manufactured by individual producers in a small way, in and about the town of Roquefort, in the department of Aveyron, in this consular district. The merchandise is cured in natural caves of peculiar formation, and the circumstances of the production of the article made it peculiarly susceptible to monopolistic control, although there are still some independent manufacturers in the field. I have a letter before me from the director of the company, who kindly says:

> Our society is represented by stock to the value of 6,500,000 francs. The stockholders have been recruited everywhere, more particularly in this region. Our company buys of the small farmers of the vicinity the milk of their ewes, which we convert into cheese in our dairies. The cheese is thereupon refined in our natural caves in the mountains of this department and placed upon the market. It is all very simple. Here it is nature that favors us.

CANDLE AND RICE SYNDICATES.

The candle manufacturers of France are already agreed as to prices, and are now coming to some sort of a closer understanding. The syndicate arrangement "does not resemble the American trust;" it is "simply an entente among producers for self-protection"—that is to say, a scale of prices has been fixed which enables all the manufacturers to do business profitably. The leader in the candle trade is L. Felix Fournier & Co., with a capital stock of 8,500,000 francs. The entire candle trade of France works with a degree of sympathy, sustaining prices at a uniform level. The Fournier Company, or the "trust," as it would be called in the United States, now owns the old Fournier works at Marseilles, and the De Milly works at Paris. The Marseilles mills turn out from 70,000 to 75,000 packets of candles per day, each packet weighing 1.1 pounds, or from 35 to 37½ tons, requiring 80 tons daily of raw material, such as tallow and palm oil. The official report for the last year says:

> We have happily ended this laborious year. The quantities normally produced in the Paris works have been added to ours without loss. The candle "Etoile" notably, which figured in the books of the house of Milly (the Paris competing concern, now absorbed) for 1,400,000 packets per year, has given under our administration 1,500,000 packets, and finally, the dividend which we propose to distribute for the year 1899 reaches, taking into account the distribution of September, 13½ per cent on the normal capital, taxes to be deducted.

Other important candle manufacturers in France are: The Stearinerie de Lyons, the Stearinerie de Dijon, and the Stearinerie Français de Paris. There are others, and an infinite number of small concerns. Manufacturers not in the syndicate usually follow the policy of the syndicate. Candles are now increasing in price uniformly throughout France, in sympathy with the rising market in raw material.

No definite information reaches me concerning the rice syndicate, which takes the form of a pool of millers and refiners, and I mention it only as among the important combinations of this sort. I find upon my list several syndicates equally important, but with the time at my disposal I have been unable to proceed with the investigation. From all that can be learned, however, it is necessary to conclude that, while commercial organization has probably not gone so far as in the United States, and has produced no single concern of vast power and perfect organization, it is through no lack of disposition on the part of capitalists to approximate the popular idea of the American trust as rapidly as conditions permit.

ROBERT P. SKINNER, *Consul.*

MARSEILLES, *May 17, 1900.*

NICE.

There are no organized "syndicates" or "trusts" in this consular district. In a few industries monopolies exist, created by virtue of contracts with the municipality, with the prefectoral authorities and with the Government, but details touching these would not appear to come within the scope of the Department inquiry.

HAROLD S. VAN BUREN, *Consul.*

NICE, *May 17, 1900.*

ROUBAIX.

I am informed by the editor of the chief daily paper of Roubaix that trusts as known in the United States do not exist in this region.

Mr. Petit states that cotton spinners in the north and east of France, as well as the majority of spinners of combed wool in Roubaix, Tourcoing, Fourmies, and Rheims have formed syndicates to regulate the production by limiting the labor hours (as was done in 1899 by cotton spinners), also for the purpose of resisting the demands of workmen in case of strikes. Wool combers of Roubaix and Tourcoing have a similar organization for the same object.

Last year, there was concerted action among a few wool dealers to maintain the high price of wool, but this failed. Agreements of this kind are occasionally made, but are ephemeral in nature. They do not in any sense resemble the American so-called trusts.

W. P. Atwell, *Consul*.

Roubaix, *May 8, 1900.*

GERMANY.

REPORT FROM CONSULATE-GENERAL AT BERLIN.

The organization of German manufacturers and producers of raw materials into syndicates or trade combinations began nearly forty years ago, the first of which any record can be obtained having been the union of salt manufacturers in the valley of the Neckar. In 1870, the period of the Franco-Prussian war, there were five syndicates in Germany, and these have steadily increased until they numbered, according to the best estimates, 345 in 1897, and cover practically the entire field of industrial activity in this country.

A "cartel," or trade syndicate is defined by Liefmann, one of the authoritative German writers on this subject, as "a combination for the purpose of maintaining the competitive power of its members, notwithstanding their varying individual facilities, against the advantages enjoyed by monopolists," by means of:

(1) Obtaining a uniform maximum selling price for products.

(2) By the creation and maintenance of a normal and rational demand for materials and labor.

(3) By creating a monopoly for every member or for every group of members in each branch of production.

All trade syndicates are organized for one, two, or all three of these purposes, and, as known in Germany, they may be divided, for the purposes of this report, into three general groups or classes, as follows:

Class A, the selling agreement, a cartel or convention under which the manufacturers or producers of a certain article or class of products agree not to sell their product below a specified minimum price, agreed upon by all members of the cartel, and changed from time to time in accordance with the varying cost of production and general requirements of the market. These rather loosely organized combinations were the original type of German trade syndicates, and served their purpose very well in prosperous times, but in periods of depression and diminished demand it was found difficult to hold certain members to the agreement, and it was decided to adopt a more binding form of organization, and put the business of selling under direct control of a central authority. This led to the creation of Class B, known as "sale syndicates," in which all members of a cartel pool their products, to be sold through the ministrations of a central committee, which, besides fixing the selling price, apportions among the members orders as they are received, in proportion to the capacity of each, the quality of the merchandise ordered, and the conditions of transport. Examples of this class, which is by far the most numerous and important of the three in Germany, are the sale syndicate of the potash mines at Stassfurt-Leopoldshalle, in Prussian Saxony, and the Great Rhenish Westphalian Coal Syndicate, which controls the production and sale of coal in western Germany. In syndicates of this class, the individual firms and companies which it includes retain their corporate autonomy, pay dividends on their own stock according to earnings, and, unless otherwise agreed in the cartel, purchase independently the raw materials of manufacture.

Class C includes the real trusts or closely organized syndicates, which absorb and take up the shares of the original corporations, issue new stock, and consolidate the whole management under the absolute control of a central authority. Of these, there are comparatively few in Germany, except those of international scope, but such as do exist are generally syndicates of large resources and wide-reaching influence. The great steel works of Friedrich Krupp, at Essen, have in this way absorbed the Germania shipyard, at Kiel, a machine shop in Berlin, as well as several coal mines and blast furnaces. Similarly, some of the large banks in Berlin have issued trust stock and bought up valuable and long-established banks at Hamburg, Dresden, and other cities, thus creating banking syndicates which exercise a powerful influence over commercial and industrial enterprises, both at home and abroad.

All these various forms of syndicates are organized under the very comprehensive and far-reaching German law of corporations, but are otherwise subject to no special supervision. There is no requirement that a cartel or syndicate shall obtain a charter from the Imperial or State German Government, nor file at any governmental office a copy of the contract or protocol which forms the basis of such association. If, in the case of a selling syndicate, a special central office is opened for the purpose of selling the products of its several members, this office must be registered like any other business house at the local chamber of commerce, and is subject to the general law governing corporations, but no other or unusual formality is imposed.

There being thus no centralized official record, it is practically impossible to state at any given time the exact number of trusts and trade syndicates which are in active function, nor obtain lists of their members or the aggregate capital which they represent. Many of these combinations are for various reasons more or less secret. They are changing in number and character from day to day, as several cartels covering the operations of buying materials, selling products, etc., are consolidated into one general, all-embracing trust, so that while the number of syndicates is now estimated at 290, or less than in 1897, the industries of Germany are in reality syndicated to a greater degree than ever before. As an illustration of this, the sugar industry has hitherto been controlled by three syndicates, one covering the production of beets, one the manufacture of raw sugar, and a third the refining interest. It was announced a few days ago that after years of effort, the raw sugar and refineries' syndicates had secured the adhesion of 97 per cent of their members and had formed a consolidated cartel covering both branches of that important industry.

In respect to their date of organization, Liefmann estimates that the original 5 German syndicates which existed in 1870 had increased to 8 in 1875, to 14 in 1879, 90 in 1885, 210 in 1890, and 345 in 1897, divided, according to the nature of business involved, into the following groups: The chemical industry 82 syndicates, iron 80, stone and ores 59, textile industry 38, paper manufacture 19, wood and manufactures of 18, coal and coke 17, metallurgy (exclusive of iron and steel) 15, food products 12, leather and leather goods 5 syndicates.

On the 1st of January, 1898, there were 224 kinds of raw materials and manufactured articles, the production, purchase, manufacture, and sale of which in Germany were controlled by syndicates, and the number has steadily increased since that date. The new combinations announced in the daily press during the past month cover sheet zinc, Portland cement, chains, the milk supply of Berlin, and printing paper. Besides these, there were six cartels governing transportation, and international selling agreements with various other countries, England, France, Belgium, Switzerland, and Austria, covering and regulating the selling price—as between two or more of these countries—of the following articles: Carbonate of ammonia, borax, uranic colors, muriatic acid, milk sugar, hydrate of chloral, soda, Thomas meal, alizarin, oxalic acid and potash, iodine, strontium, bromine, certain fertilizers, chromate and other salts of potash, saline products, dynamite, glanzgold, sporting ammunition, rails, billets, wire, gas pipes, wood screws, cement, mirror glass, coke, raw zinc, bismuth, lead, and copper.

The dynamite trust, which has been expanded until its operations cover most of the new explosives, is one of the most widely extended and powerful of these international syndicates. It owns several valuable patents, and has driven very hard bargains with several of the European governments. It includes in its territory Germany, Switzerland, France, Belgium, and Great Britain, and is financed and managed from London.

The great Rhenish-Westphalian coal trust, which controls the mining and prices of coal in western Germany, is a combination of several smaller syndicates, that were consolidated about 1892. It estimates in advance the coal requirements of each coming year, apportions the amount among the different mines under its control, fixes the price, and gets it under all circumstances. The Prussian Government pays the syndicate price for the coal supply of its railway system; the machine shops, shipyards, and such of the iron mills as do not possess their own mines, do the same. The Silesian coal fields are similarly syndicated, and are represented, in respect to sales, by three men in Berlin.

It is impossible within the limits of a consular report to do more than indicate briefly the leading facts of a subject so vast and many-sided that it has a literature of its own, which in Germany has grown to the proportions of a small library. As an illustration of the whole system, and to show how thoroughly syndicated the industries of Germany are to-day, there is given herewith a skeleton sketch of a single group of these combinations:

The German iron trade syndicates are six in number, as follows: The pig-iron syndicate, the ingot and steel billet syndicate, the girder syndicate, the drawn-wire syndicate, the plate and wire rod syndicates. Their purpose is the usual one, to prevent unhealthy competition by concentrating the sale of the combined output in the hands of a managing committee, which apportions and distributes orders among the members, fixes selling prices of products, and, as nearly as practicable, regulates production to meet but not exceed the demand.

The pig-iron syndicate is a combination of three subsidiary cartels, viz., the Rhenish-Westphalian, with headquarters at Düsseldorf, the Comptoir of Lorraine and Luxembourg, and the pig-iron syndicate of the Siegerland, an important ore-producing district in eastern Westphalia. The main offices of this syndicate are at Düsseldorf, and the consolidation dates from 1897, the year which, more notably than any other, saw the somewhat loosely organized combinations which had been held together by mere selling agreements consolidated and reorganized on a new and firmer basis, which put not only the sale of products, but in many cases the purchase of materials, under control of a central managing committee.

The ingot and billet steel syndicate has its central office at Düsseldorf, and represents the steel works on the Rhine, the Moselle, Luxembourg, the Saar, and in Westphalia. It is known in German as the "Halbzeug Verband" (association of half-finished products), and, like the pig-iron syndicate, was until 1897 a selling association, but was then reorganized into a full-fledged syndicate.

The girder syndicate is of recent formation, its organization having been completed in 1899. It comprises three groups or sections, viz, the South German girder syndicate, founded as early as 1884, covering the Saar district and Luxembourg; the Lower Rhine and Westphalian girder syndicate, and, thirdly, the Peine Girder Works, at Hanover. Its chief offices are at Düsseldorf, and it controls absolutely the production and prices of iron and steel beams and girders in Germany.

The drawn-wire syndicate is another recent consolidation, with four sections, having been founded in its present form last year. The headquarters and export office of the syndicate are at Hamm, in Westphalia, and the four branch offices that attend to the German home trade are located at Berlin, Dresden, Mannheim, and Breslau, respectively.

The wire-rod syndicate was founded in 1896, and has its central offices at Hagen, in Westphalia.

The steel and iron plate syndicate has its headquarters at Essen, the seat of the great steel works of Friedrich Krupp. It was organized as a sale syndicate in 1897, and in the following year was reorganized as a corporation with limited liability.

The purposes of all these iron syndicates are similar to those of the coal trust, and their methods are practically identical. In each case the plan of organization is the same. Having come to a general agreement and signed a contract binding all members to sell their entire product to the central committee, an expert commission was sent round to visit all the works, note carefully their capacity, quality of principal product, and location with respect to transportation, local market, and facilities for export. All orders are received by the general manager of the syndicate and apportioned among members according to the capacity of their works and the special requirements of each case. Orders for export are naturally given to works nearest the frontier, and when for such or other reason one of the associated plants receives more than its due quota, the excess is deducted in the apportionment of the next quarter. At the close of the year, all accounts are balanced and a general compensation of the excesses and deficits of production arrived at, in which each plant is credited with the quota assigned to it in the scheme of allotment.

The organization is an ironclad compact, in which each contracting party agrees to submit, without conditions, to all rules and measures adopted by the syndicate, or, in default, to be fined for disobedience.

For this purpose, blank acceptances are signed by each member and put in the hands of the syndicate treasurer. Should a member be fined, the treasurer fills in the amount of such penalty on the signed check and puts it into circulation. Such a syndicate has naturally great power and efficiency in promoting export trade. In the allotment of orders, the plants nearest the frontier or tide water are favored because they can most easily export their surplus, which, if allowed to accumulate, might depress the market at home. If, as sometimes happens, this excess has to be exported at a loss, the resulting deficit is made up to the losing member from the funds of the syndicate, which collects the money for such export bounties and for its own working expenses by a levy or tax, assessed by a general meeting, in the form of a percentage on the aggregate sales. It will be remembered that several years ago, it was discovered with dismay in England that the Germans were actually selling structural iron and steel and certain railway supplies in London and Liverpool, and underselling the British ironmasters for the colonial trade. An expert came over posthaste to find how this could be possible, and upon investigation found two fundamental facts underlying the phenomenon. The first of these was that the Germans were making iron with coke roasted in retort ovens, which saved the 40 per cent in value of by-products which the English and American beehive oven was pouring out as waste into the murky air; and secondly, the iron syndicates, by maintaining uniform and profitable prices at home, were enabled to offer iron and steel in foreign markets at prices sufficiently low to get the trade. This, as the expert reported, was "competition of a particularly stubborn and deadly kind," and so it has proved to be, not only in iron and steel, but in respect to a wide range of manufactured products that are exported by the syndicated industries of Germany.

There are likewise syndicates whose products are not exported, but are consumed exclusively in Germany, and of these a ready example may be found in the "Aktien-Gesellschaft Briket-Verkaufsverein," at Dortmund. This is a union of 25 coal-mining companies which make from the dust and waste of their mines briquettes for steam and domestic fuel. As its name indicates, this is mainly a selling syndicate for its products, but its functions also include the purchase of coal tar, used as matrix to hold the pressed briquettes together. It was formed under a sale cartel in 1891 and reorganized as a closely united trust in 1898. Its capital is only 120,000 marks ($28,590), this being sufficient to carry on the central office at Dortmund and a branch at Hamburg, whereas the amount of its annual sales is counted by millions.

No portion of this subject is more suggestive and interesting than that which relates to the influence of one syndicate in causing or even compelling the formation of others in correlated branches of industry. This is particularly true of the class of trusts known as "consumers' syndicates," the purposes of which are defined as follows:

(1) To purchase materials and employ labor on a large scale at uniform cost and not above a certain maximum price.

(2) To limit the demand for materials and labor to actual requirements.

(3) To produce themselves, when possible, the essential materials of manufacture.

As an example of this generative power of syndicates may be cited that of the wire manufacturers of this country, who some years ago combined and raised the selling prices of their products by 20 to 25 per cent. But wire is the chief material for the manufacture of wood screws and the smaller grades of chains, and forthwith the makers of those articles combined to resist the demands of the wire-drawers or, when that was not possible, to advance the price of their own finished products. The syndication of the Stassfurt potash mines compelled similar combinations on part of the soap manufacturers, and so on in various other branches of industry. There is to-day pending a struggle between the syndicate of print-paper makers and the publishers of German newspapers, in which the latter are on the point of forming a syndicate to resist the advancing prices of the paper trust, or, failing in that, to establish pulp factories and paper mills of their own. About 1890, a syndicate which controlled the production of certain materials used in glass manufacture advanced their prices about 7 per cent. Thereupon, 24 bottle factories combined and raised the price of their products 10 per cent. This was more than the wine dealers could stand, so they in turn organized a syndicate to resist the increased cost of bottles and to build a glass factory for the manufacture of their own supply.

On the other hand, there are in Germany labor syndicates quite as well organized and active as those of the employers.

Several of the trades, notably the compositors and printers, are thoroughly organized and ably though conservatively managed, and exercise a decisive influence in book publishing, which is one of the important industries of Germany.

Although much has been said and written on the influences which have been most potent in promoting the organization of trusts in Germany, it does not appear that any clearly demonstrated conclusion has been reached. From the literature of the subject it would seem to be conceded that hard times, the periods of industrial depression and dull markets which afflict periodically all countries, have stimulated the formation of syndicates, the purpose of which, as stated by Brentano, has been "to provide a parachute to enable the victims of overproduction to get safely down to a solid basis." On the other hand, good times have promoted the organization of syndicates to resist the extortionate demands for raw materials and to prevent the sudden and excessive advance of selling prices by a few unduly grasping manufacturers, which would attract to a given industry fresh capital and cause the erection of new plants which would in time lead to overproduction. This consideration has been carefully looked after in the management of German syndicates. When, for instance, the patent on salicylic acid expired in 1887, the makers of that chemical formed a special cartel and reduced the selling price 20 per cent, so as to discourage new firms from entering the field.

The adoption in 1879 of a tariff policy which levied protective duties on manufactured goods while leaving most raw materials free, enabled the Germans to confine to their own country the scope of many new syndicates which under free trade would have been obliged, in order to become effective, to be made international. Liefmann, in his treaties published at Freiburg in 1897, says on this point: "Had Germany not adopted a protective policy there would now be in existence a greater number of powerful international trusts, and it is very questionable whether consumers would be better off than they are to-day."

It is not within the province or purpose of this report to condemn or defend trade syndicates, nor to enter upon any discussion of the question of their morality. The important facts in this connection are that they exist in Germany in such numbers and with such extended influence as to control practically all the important industries of this country; that they have been mainly organized during the years which have changed this Empire from an agricultural to a leading industrial and exporting nation, and that there exists here comparatively little of the distrust and popular hatred of such combinations that prevail in certain other countries. This absence of hostility to trusts, on part of both Government and people, is apparently due to three facts:

First. The principal German syndicates have, with rare exceptions, exercised their authority conservatively; have sought to prevent speculation, overproduction, and consequent ruinous fluctuations in prices. They have, through long contracts at fixed prices, steadied values and given regular employment to labor. They have not been used for stockjobbing.

Second. The element of publicity has operated to disarm suspicion and criticism. Every incorporated company which operates independently or as member of a syndicate is from the moment of its organization under control of the law of corporations, a statute that reaches to every detail of corporate organization and management; compels the periodical publication of statements showing the exact condition of the company's affairs; makes its books and assets subject to official inspection at all times; and holds directors and officers rigidly responsible for every breach of trust. No influence or wealth can save from prison a faithless or dishonest director of a stock company under such a system, and when corporations combine in a syndicate, their earnings, capital, profits, dividends, or losses remain subject to official examination and periodic publication.

Third. The people of Germany appear to have reached the conclusion years ago that the foundation of syndicates and trade combinations was a part and necessary incident of a general process of development; that, in order to neutralize their disadvantages in respect to natural resources and make a winning fight for a large foreign trade, they must have every advantage that could be derived from concentrated capital, and able, economic, harmonious management. As has been said by one of the advocates of the syndicate system: "It has put the leading industries of Germany under the control of combinations of manufacturers with large resources, able to command the highest technical and commercial ability, to control their business at every step, from the source of the raw material to the sale and distribution of the product; to abandon obsolete methods and adopt improved machinery and processes; to eliminate waste, avoid the risks of needless competition and substitute throughout the whole operation the careful, intelligent economy of the large transaction for the higher expense ratio of the smaller concern, and by thus lessening at every stage the cost of production, to maintain uniformity of prices, prevent speculation, and meet most effectively the competition of other countries in foreign markets."

That the past fifteen years have witnessed an extraordinary development of German manufactures and commerce; that the number of industrial employees has increased during that period from 7,340,000 to 10,900,000 (or 48 per cent); and that the general condition of the working classes, their intelligence, prosperity, and standard of living have definitely improved, is obvious and unquestioned. Wages in the shipbuilding trade are said to have advanced 1 per cent per annum during the period since 1880; but this increase must be attributed to the strong and constant demand for ships, and not in any direct way to the influence of syndicates. The following tabular statement shows the increase in the annual average wages earned by workmen in fourteen leading branches of industry which are largely controlled by syndicates, during the five years from 1894 to 1898, inclusive, the latest for which statistics are obtainable:

Industry.	Average wages per annum.	
	1894.	1898.
Coal mining and furnaces	$218.50	$246.00
Stone and ore mines	99.96	109.48
Metal industries	193.35	213.24
Machinery industries	210.75	228.60
Chemical industry	196.82	211.34
Textile industry	143.90	173.02
Paper industry	149.46	173.50
Leather industry	190.87	207.35
Lumber and wood industry	160.65	173.26
Food products	148.90	163.02
Clothing manufactures	138.57	150.75
Building trades	124.95	151.96
Transportation	177.64	196.35

These are indeed meager wages, and, when the high and increasing cost of living is considered, would show that labor has not yet received its due share of the benefits which have been derived from the sustained period of activity in German industries. The most that can be said is that employment, especially for skilled labor, has been more active and constant during the past fifteen years than ever before; that wages, although still very low, have steadily though slowly increased, so that the old-age-and-invalidity insurance law, enacted in 1892, has recently been amended so as to include a fifth class of working people, with higher incomes—a class which did not exist when the statute was originally created.

Clothing and certain other articles of general consumption, although unquestionably dearer than they might have been under a system of open competition between manufacturers, are relatively cheaper than food materials, which, with the exception of sugar and a few other prepared food products, are not specially under the control of syndicates. But there are other and abundant reasons why bread, meat, and all other food stuffs should be dear in a busy, densely populated country like Germany. Tobacco in all its forms and beer are cheap, abundant, and excellent, although there is in nearly every town a trade combination between local dealers which regulates the retail price of beer. The cost of iron, steel, and coal for all purposes of home consumption has been increased by the action of syndicates—to what extent it would be difficult to determine. Sharp criticisms have been heard during the past three months against the great coal and coke syndicates for the high price and scarcity of fuel, though it is but just to say that the coal famine has affected more or less equally all countries, and has been also partially due to the phenomenal activity of the metal and other industries and to miners' strikes in Austria and Saxony.

In view of the wide range of opinions which may prevail concerning certain points in this complicated subject, it has been deemed advisable to complete this report by an authoritative statement from a competent and impartial German source. For this purpose, a series of questions covering substantially the inquiry of the Department's circular have been submitted to Prof. Dr. Ernst von Halle, author of a volume entitled Trusts in the United States (Macmillan & Co., 1895), and an expert of recognized authority on this and kindred economic subjects.

The questions submitted were:

What, in your opinion, has been the effect of cartels and syndicates in Germany on, A, the market values of manufactured products for the German home trade and for export? B, on wages paid to labor? C, on the general industrial development of Germany? D, by what class or classes of people and for what reasons are cartels and trade syndicates opposed and denounced in this country?

To which Professor von Halle courteously replies as follows:

Answer A. There are cartels as well in the wholesale as in the retail trade. I only know of a very few instances where complaints have been made about undue advance of prices originating from cartel manipulations. The wholesale cartels seem to regulate their prices rather closely in conformity with the general tendencies of the markets, while shopkeepers' cartels try to keep theirs as steady as possible. It has frequently been shown, especially in late years, that the large wholesale cartels have also followed the policy of steadying prices, and while they have served to avoid local and temporary breakdowns, they have in various instances officially warned their members and other industries to refrain from the exaction of excessive profits in times of generally rising markets. Here and there they have offered long contracts for one or two years' supplies, which they have on the other hand sometimes enforced upon their customers. The regulating influence has been very strong where dealings took place between a number of powerful cartels in various phases of industrial production. The general impression is that this steadying tendency has been the most characteristic effect of cartels upon the home trade.

Only a minority of cartels seem to have interest in foreign trade. Often the terms of agreement are restricted to the home market, but others also extend their activity into international trade; others still are members of international organizations. No doubt in a number of instances they have offered cheaper prices to foreign countries, not only within the range of protected industries, but wherever they had an interest to extend their trade and transactions. As powerful bidders, they have sometimes been able to secure beyond the boundaries of this country large foreign contracts or shares therein, where individual offers would not have been of sufficient influence to secure due recognition of the merits of German industry.

Answer B. It does not seem that cartels have attempted to deal with the wage problem. There exist other employers' organizations for fighting purposes, to which the individual members of the cartels frequently belong. Sometimes they also seem to agree privately about wages to be paid, and terms of employment, but workingmen have not yet complained of undue attempts on the part of cartels to cut down wages. As a matter of fact, wages have generally risen within the last two decades, in both syndicated and in nonsyndicated industries, but the friends of syndicates have emphasized the fact that the steadying and beneficial effects of combinations have generally contributed to the favorable situation of German industry that made possible the advances in wages throughout.

Answer C. I do not hesitate to say that according to my opinion, Germany would be already in the midst of a dangerous industrial crisis but for the modifying and regulating influence of our cartels in most branches of production and distribution. The country, with its dense population and increasing capital that seeks employment, could not stand that reckless speculation that would result from unrestrained competition. Modern production by means of steam-driven machinery can not stand unlimited competition, which too often leads to the destruction of the value of large capitals. Machine production requires close technical regulation and does not admit of economic anarchy. So the effect of cartels seems to have been to initiate a more harmonious industrial system, permitting promoters to invest their capital in many instances with ease and safety, where without combination they might have been too timid to assume the risks of unlimited competition. The relatively low quotation of German consols and other public securities may be partly attributed to the great number of safe investments in cartelized industrial undertakings.

Answer D. I do not believe that any class of people in Germany makes opposition to trusts part of its programme. Among the members of the Agrarian and other anticapitalistic conservative parties on the one hand, and among the extreme liberals of old-fashioned creed and the labor parties on the other hand, are some opponents to cartels; but only a few of them have in an outspoken manner and for many years evinced anticombination tendencies. Opposition to trusts has nowhere been made a plank of political platforms or been used in election contests. Also among officials, scientists, and lawyers, cartels are not considered unwholesome or objectionable per se. The supreme court of the Empire (Reichsgericht) has, in March, 1898, officially recognized the economic justification of combinations and their right to legal protection, unless they use unlawful methods of checking competitors who decline to join them. Only the great political dangers that arise from the influence of large capitalistic organizations have been duly referred to in various quarters. The formation of "states in the state," with overwhelming power within the field of their operations, has caused a demand for a limited public control over their transactions. Extremely high prices charged to the German Government by the combinations of dynamite and explosive manufacturers have led influential members of the Reichstag to ask for an extension of state manufacture to those branches. On the other hand, a cartel statute, after the model of the Austrian law of 1897, is in preparation, which, so far as I know, does not intend to check combinations, but to subject this form of industrial organization to greater publicity and control.

Thus far Professor von Halle. In estimating the position and functions of trade syndicates in Germany, some account must be taken of the traditions and racial qualities which underlie and determine, to an important degree, the character of the German people. They are, in general, conservative in all that relates to matters of business. They are believers in thorough education; careful, scientific processes; and steady, solid, legitimate development of business enterprises. They are therefore, with few exceptions, opposed to speculations and the taking of large risks for the chance of suddenly acquiring wealth. Although valiant and enterprising when confident of the result, they prefer moderate and steadily maintained profits, and in good years most corporations will, instead of declaring large dividends that will push their shares upward in the stock market, "write off" on their books part of their cost of construction, or lay by a surplus with which to maintain average dividends in less prosperous times. Employers and employed alike realize that the present and future greatness of Germany are largely dependent on the virility and growth of her foreign commerce, and they have thus far submitted, for the most part patiently, to the inevitable burdens and inconveniences of a commercial and industrial system which, as they believe, contributes to that result.

FRANK H. MASON,
Consul-General.

BERLIN, *May 14, 1900.*

BARMEN.

According to the best information obtainable, trusts, in the American sense of the word, do not exist in the German Empire, with the exception of the coal trust, on which I reported on the 2d of April, 1900.[1]

Trade combinations are in existence here, but they are mostly unions of individuals, not corporations, and statistics of capital employed in such enterprises are not available.

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[1] See Special Consular Reports, Vol. XXI, Part I.

In 1880 cartel conventions, so called, were organized in Germany for the purpose of protecting production.

The interpretation of the word cartel is about as follows: Agreement of manufacturers in the same branch to regulate production by the actual demand for the purpose of facilitating competition and fixing prices. Merchants becoming members of a cartel abandon the privileges of making their own prices, of delivering to parties of their own choice, and of deciding the extent of their production. They bind themselves to sell to certain persons only, at fixed prices. Overproduction and low prices gave the first impulse to the organization of cartels. Many corporations were formed, however, for the sake of keeping up prices. These are so-called conventions, organized to stipulate prices at which certain goods are to be sold. These prices are binding on the members of the convention, and if any manufacturer offers goods below the figure, he will be condemned to pay a heavy penalty.

Cartels are usually formed in times of prosperity with the idea of obtaining better prices. Individuals can not act independently in raising the prices of their fabrics unless they are specialties, which occur in very rare cases. Cartels offer facilities in the purchase of raw materials, as they can make larger contracts generally at lower figures.

If the majority of members of a certain branch decide to organize a cartel, small manufacturers have no choice but to join the combination or compete with a force that has all facilities for driving them to the wall.

Combinations were organized in many branches in Germany as early as 1893, and in 1897 the following existed: Coal mines, 17; metal branch, 15; iron industry, 80; chemical works, 82; quarries, brick, 59; textile industry, 38; paper manufacturers and book printing, 19; carved woodwork, 18; leather manufacturers, 5; nourishment, food, 12. Total number, 345.

They were not intended to be permanent organizations, but combinations temporarily necessary for different reasons, such as prevention of overproduction, establishment of prices, etc.

MAX BOUCHSEIN, *Consul.*

BARMEN, *May 10, 1900.*

BRESLAU.

There exist no regular trust and trade combinations in this consular district, but only some close corporations in the iron industry; i. e., all factories producing like articles have made an agreement among each other to sell their goods only through one firm or their own established office. The following is a list of such close corporations: Manufacturers of wire nails, manufacturers of horseshoes and shoe nails, and manufacturers of chains. These three corporations transact all their business through the banking house of Delbrueck, Leo & Co., Mauerstr., Berlin. Sale office for gas pipes Dusseldorf; sale office for stew pipes at Dusseldorf; pitch and hay fork office at Hagen, Westphalia; zinc plate sale office at Berlin, Dorotheenstr.; sheet iron sale office at Berlin; tin plate sale office at I. H. Stein's, Cologne; central office of the united manufacturers of wire netting, Cologne; sale office of the united manufacturers of enameled goods at Markgrafenstr., Berlin.

The oldest of these corporations has existed about ten years, but most of them are of recent origin—from 1898 or 1899. On account of this no practical effect can be stated, but it is generally supposed that the prices of merchandise as well as wages have increased. The amount of production has so far kept on a good basis.

Besides these institutions, it is the custom for the largest firms in a city dealing in iron goods to make an agreement to keep up standard prices.

It is impossible to get any information about the capital employed, the value of the plants, and the stock valuation of the corporations mentioned. Each factory uses its own working capital and makes its sales through the bank or sale office of the corporation.

C. W. Erdman, *Consul.*

Breslau, *May 12, 1900.*

BRUNSWICK.

The commercial tendency of the age is toward concentration of capital and enterprise. The improvements in steam travel and in the application of electricity to the communication of messages and to the rapid transit of persons and property are steadily reducing the distances between communities. Accumulations of wealth at money centers and new financial facilities make possible enterprises and combinations in trade never before imagined. These economical changes must have their effect upon the commercial world. Enterprises in different branches of trade combine for profit or to protect themselves from destructive competition. In Germany, the trade combinations which have existed for some time are rapidly extending their influence, and new ones are being daily formed or projected. The inland transportation of Germany may be said to be controlled by the Royal Imperial Prussian Railroad Union. The telegraph lines and telephone system are also in the hands of the Imperial Government. The North German Lloyd Steamship Company and the Hamburg-American Line are rapidly absorbing the routes of ocean traffic to and from Germany. In Berlin and other cities, the street electric railroads are owned by single companies. For some time past all the sugar refineries have been united in a syndicate, and on June 1, 1900, the new cartel, which embraces 98 per cent of all the raw-sugar factories, went into operation. The kaliwerke syndicate controls to a greater or less extent the output of the potassium mines, and the Westphalia coal syndicate the price of coal. In other branches of business may be mentioned the Rheinisch Westfälische Ziegel (brick or tile) Syndikat, the union of German jute industry, the association of German chain manufactures, the union of German agricultural-machine factories; syndicate of newspaper-paper manufacturers; projected cement syndicate; the rolled-wire trust, etc.

An article in the Berliner Finanz und Handelszeitung of June 10, 1900, says:

> The number of trusts and syndicates, which at the beginning of 1899 amounted in Germany to 200, increases from day to day, so that there is hardly an industrial product the makers of which do not have an understanding in reference to the production, the price, and the conditions of sale.

The two combinations with which my consular district is especially concerned are the sugar syndicate and the potassium mines syndicate, and I will endeavor to give some details of their organization.

The Brunswick Landeszeitung of May 12, 1900, contains the following report:

SUGAR CARTEL.

As repeatedly communicated, the sugar cartel, prepared some years ago, has been concluded with 98 per cent of the production, and goes into operation on the 1st of June. The attempts to effect a union among the sugar factories date from the eighties, the time of the depression of the sugar industry. In order to control the sale of raw sugar, a sugar bank was first considered, but the efforts in this direction failed, as the directories of the peasant sugar factories did not want to be deprived of the right to sell their own sugar Later, the refineries made various offers to the manufacturers of raw sugar, but these were not successful. In 1894, after overproduction had again affected unfavorably the sugar industry, it was perceived that an association of raw sugar factories must be created. At first a one-sided cartel was taken into consideration by the raw-sugar factories, but this appeared impracticable, as the refiners had the disposal of great quantities of raw sugar. As soon as cooperation with the refiners was determined upon, the agreement followed, which with few alterations forms the basis of the present cartel, which also was used by the Austrian-Hungarian factories in 1897, in order to effect their sugar cartel. In the same year the German Sugar Syndicate Company, with limited obligation, was formed, and later the syndicate of German refineries. The two companies furthered the efforts to bring about the present results. A normal price of 12 marks 75 pfennigs per centner ($3.04 per 110 pounds) is established for the domestic refineries and the consumers of raw sugar. The refiners are obligated to pay into the treasury of the raw-sugar factories the difference between the Magdeburg quotations per standard 88 and the price of 12 to 75 marks ($2.86 to $17.85), with the additional payment of 10 per cent as difference between raw and refined sugar. For example, the Magdeburg average quotation amounts to 10 marks ($2.38) per centner, consequently the refineries have to pay to the raw-sugar syndicate 2 marks 75 pfennigs (65 cents) + 0.275 marks (6½ cents) equal to 3.025 marks (72 cents) per centner (110 pounds). These collective amounts, after subtracting the expenses of management, will be divided at the close of the year among the raw-sugar factories, according to the quota of State taxes for each factory for the year 1900–1901.

If one takes the calculated German production for late years and the above price of 10 marks ($2.38) per centner, standard 88, there results the following statement:

Raw-sugar production, 38,000,000 centner (4,180,000,000 pounds); domestic consumption, 15,000,000 centner (1,650,000,000 pounds); income of the raw-sugar syndicate, 15,000,000 times 3.025 marks (72 cents), equal to about 45,000,000 marks ($10,710,000) divided by 38,000,000 centner of production, equal to 1 mark 18 pfennigs (29 cents) a centner, for cartel profit.

The raw-sugar factories, if they sell their entire quantum at the Magdeburg average price, will receive in the above case 11 to 18 marks ($2.62 to $4.28) per centner; if the Magdeburg average price amounts to 9 marks ($2.14) the cartel profit is calculated at 1.63 marks (0.39 cents), equal to 10.63 marks ($2.53); if the Magdeburg average price is 11 marks ($2.62) the cartel profit is calculated at 0.76 marks (19 cents), equal to 11.76 marks ($2.81), all for goods of 88 standard.

The normal price of 12.75 marks per centner, according to prices of latest years, charges the refined sugar with about 3 pfennigs (three-fourths of a cent) per pound. The cartel has no effect upon the sale of raw and refined sugar to foreign countries; the conditions remain as hitherto. Nor will restrictions be laid upon the sales of the raw-sugar factories.

The refineries receive for their goods consumed a cartel profit of 50 pfennigs (12 cents) per centner of refined sugar. The prices for the latter are to be established monthly by the refineries.

The price of refined sugar is composed of the following items:

	Marks.	United States equivalent.
Price of raw sugar	12.75	$3.04
Cost of manufacture, freight, etc	4.00	.95
State taxes	10.00	2.38
Cartel profit of refineries	4.50	.12
Total per centner	27.25	6.49

This minimum price can be somewhat raised inside of fixed limits, especially for the purpose of granting white sugars destined for export a small premium, so that not only the sugar sold inland, but also the refined sugar for export, receives a cartel profit.

The cartel is provisionally concluded for five years. Its effect upon the sugar industry will be, in short, as follows:

(1) A cartel profit is assured to the raw-sugar factories, higher as the market price is lower and lower as the market price is higher, and will enable the even less favorably situated raw-sugar factories to obtain a profit, at the same time affording reasonable prices for raw beets.

(2) The white-sugar factories receive, together with the above profit, the refinery profit on their production.

(3) Besides the profit of 4 marks (95 cents) included in the above limit of cost of manufacture, the refineries receive a cartel profit of 50 pfennigs (12 cents) per centner for the domestic consumption for goods for export, a trifling addition.

In order to prevent a too sudden rise in the price of sugar, the payment on raw sugar shall amount in the first year to 50 per cent and the second year to 75 per cent of the cartel profit.

REFINERIES IN GERMANY.

There are 52 sugar refineries in Germany. Of these, there are 17 corporate companies with a gross capitalization of $11,196,000. The remaining refineries belong to private parties and their capitalization is not published.

In the Duchy of Brunswick, there are four of these corporate refineries with a capitalization of $1,665,500, and two private refineries.

Raw-sugar factories in Germany.

Prussia:		Baden	1
Provinces of—		Bayern	2
Brandenburg	15	Braunschweig	32
Hannover	43	Grossherzogtum Hessen	5
Hessen-Nassau	5	Lippe-Detmold	1
Ostpreussen	3	Mecklenburg-Schwerin	10
Pommern	12	Mecklenburg-Strelitz	2
Posen	20	Sachsen-Meiningen	1
Rheinland	11	Königreich Sachsen	4
Sachsen	117	Schwarzburg-Sondershausen	2
Schlesien	59	Saxe-Weimar	3
Schleswig Holstein	3	Württemberg	4
Westfalen	3	Elsass	1
Westpreussen	19		
Anhalt	25	Total	403

Sugar factories and refineries in the Duchy of Brunswick: Altenau bei Schöppenstedt, capital, $112,500; loan, $33,750. Barmen, capital, $95,437; value of plant, $83,000. Eichthal, capital, $78,750; loans, $18,750; plant, $115,000. Bockenem, capital, $144,600; value of plant, $133,400. Broistedt, capital, $103,000. Broisem, capital, $55,000; loans, $40,000; plant, $115. Burgdorf, capital, $106,000; loans, $130,000; plant, $156,400. Hedwigsburg, capital, $116,000; loans, $40,000; plant, $184,000. Hessen, capital, $99,000; plant, $132,500. Jerxheim, capital, $70,000; plant, $75,000. Königslutter, capital, $150,000; loans, $170,000; plant, $324,000. Destrum, capital, $103,000; loans, $56,000; plant, $211,250. Rautheim, capital, $75,000; loans, $70,000; plant, $160,000. Salzdahlum, capital, $60,000; plant, $87,000. Schöppenstedt, capital, $100,000; plant, $94,000. Trendelbusch, capital, $122,000; plant, $170,000. Thiede, capital, $90,000; loans, $110,000; plant, $235,000. Uefingen, capital, $67,000; plant, $58,000. Vechelde, capital, $75,000; plant, $100,000. Wierthe, capital, $67,000; loans, $4,000; plant, $126,000.

POTASSIUM-MINES SYNDICATE.

The first convention of the owners of the potassium mines took place in the year 1879. Four mines were represented, namely: The Prussian Fiscal Works at Stassfurt, the Fiscal Works at Leopoldshall, the Kaliwerk Douglashall at Westeregeln, and the Kaliwerk Neustassfurt at Löderburg. The convention fixed the quota of kali salts to be produced by each of the works, regulated the number of orders to be referred to each factory, and fixed the price and manner of payment. Other agreements followed in the course of time, including owners of chemical factories, and regulating the prices of other products of the potassium mines, namely, chloride of chalk, sulphate of potassium, etc. Not only the production of karnallit at the mines was regulated, but the raw kali salts, such as kainit, sylvinit, and schönit. The favorable result of these agreements led to the formation of new mining companies and subsequent competition.

From 1888 to 1890, the potassium industry assumed great dimensions, and on the 22d of July, 1891, the potassium sale syndicate at Leopoldshall Stassfurt was created. The general assembly has the right to choose the committees, regulate the finances, distribute delivery orders in accordance with agreements, and establish prices for manure salts. Each of the works can send a representative to the assembly, accompanied by his alternate. The general assembly meets semiannually upon invitation of the presiding committee, and may be specially called by 1,000 votes.

The works composing the syndicate are: Cons. Alkaliwerke, Westeregeln, capital $3,100,000; Actien-Gesellschaft Kaliwerke, Aschersleben, capital $3,000,000; Gewerkschaft Hercynia, capital $542,500; Actien-Gesellschaft Deutsche Solvay Werke, capital $2,000,000, reserve capital $5,000,000; Actien-Gesellschaft Thiederhall, capital $1,000,000, loans $1,000,000; Gewerkschaft Wilhelmshall, capital $462,500, loans $750,000; Gewerkschaft Glückauf, Sondershausen, capital $500,000, loans $500,000; Gewerkschaft Hedwigsburg, capital $200,000, loans $750,000, reserve capital $100,000; Gewerkschaft Burbach, capital $510,000, loans $750,000; Gewerkschaft Neustassfurt, estimated capital $2,500,000; Gewerkschaft Ludwig II, capital (estimated) $1,750,000; Preussischer Bergfiskus, estimated capital $3,000,000 to $4,000,000; Anhaltischer Landesfiskus, estimated capital $2,500,000 to $3,500,000.

THE RHENISH WESTPHALIA BRICK SYNDICATE.

This began business on the 1st of March, 1900, at Dortmund, Westphalia. Thirteen unions of brick factories belong to it, embracing 200 kilns. These are capable of producing yearly 780,000,000 pieces of round stove brick. Four of the unions, on account of the lack of demand and the accumulation of bricks in the kilns, have determined to reduce production 25 per cent; four others, 50 per cent, and five others, to close down. On the 1st of May, the stock on hand amounted to 115,000,000 bricks. The price for 1,000 pieces is now 22.60 marks ($5.37) delivered free at the place of building.

UNION OF GERMAN IMPLEMENT FACTORIES.

The annual general assembly of this union took place at Wiesbaden on May 12, 1900. The opinion was expressed that the tariff duty must be high enough to grant sufficient protection to a branch of business particularly exposed to American competition, and to offer an effective handle for obtaining concessions from foreign countries.

TIN-PLATE SYNDICATE.

The negotiations which have lately taken place between the syndicate committee and the tin-plate rolling works situated in the Rhenish and Siegen districts have been accompanied with success. These works have hitherto held themselves aloof from the syndicate. The final conference will be held in July. The Upper Silesia Tin Rolling Plate Works, which has for some time past acted in close agreement as to prices, has promised to join the syndicate. The purpose is to regulate the quantities of work for its members from the domestic and foreign market; to prevent unfair competition in selling prices and in supply of union goods, and to restrain an immoderate rise in prices during favorable business periods.

GENERAL OBSERVATIONS.

The foregoing are examples of German trusts, called syndicates. These trade combinations seem to prevail in all civilized countries, and to arise from natural commercial conditions irrespective of politics. They flourish alike under free trade or protective policies, and under republican or monarchical institutions. The combinations of each country have probably their own peculiarities. In Germany, the members of each syndicate retain their individuality and are not swallowed up in one joint stock company. In the formation of the syndicate, not only the ability of each member to contribute to the benefit of the whole is considered, but each one receives a just percentage of profit or must meet his proportion of loss. A directory, chosen by election from the members of the syndicate, manages its affairs. So far, there has been no legislation in Germany in regard to these combinations. They do not seem to be regarded as objects of terror, but as evidences of business activity. The same spirit of commercial consolidation is shown in retail business, in the establishment of department stores, and of "filiale" or branch stores. In Prussia a law has lately been passed in the interest of small dealers, taxing department stores on sales which exceed 400,000 marks ($100,000) in value. There is one cigar firm in Berlin which has sixty-five filialen or branch stores situated on different streets. Extortion does not seem to be the evil apprehended here from these trade combinations, but collapse. Their growth is fixed by profit. The moment they cease to be profitable, or lose money, their end is at hand, and they may drag down in their fall more stable institutions and lead to panics such as have not yet been experienced in the commercial world.

TALBOT J. ALBERT, *Consul.*

BRUNSWICK, *June 22, 1900.*

DRESDEN.

While there are a number of syndicates or combinations formed among manufacturers for the maintenance of prices, there are but two industries in this consular district that have formed a trust, in the American sense of the term.

The first is the photographic-paper trust, which was established in 1890 and is composed of the following firms: The "Vereinigte Fabriken Photographischer Papiere," in Dresden, with a capital stock of 1,150,000 marks ($273,700); the "Dresdner Albuminpapierfabrik Aktien-Gesellschaft," in Dresden, with a capital stock of 400,000 marks ($95,200); the "Fabrik Photographischer Papiere auf Aktien, vorm. Dr. A. Kurz," in Wernigerode, with a capital stock of 1,325,000 marks ($315,350); the "Fabrik Photographischer Papiere auf Aktien, vorm. Carl Christensen," in Berlin, with a capital stock of 400,000 marks ($95,200); the "Protalbinwerke Aktien-Gesellschaft," in Vienna, with a capital stock of 900,000 marks ($214,200).

The second is the dynamite trust, founded in 1895 and composed of the following firms: "The Nobel Dynamite Trust Company, Limited, London," with a capital stock of 60,000,000 marks ($14,280,000); the "Rheinisch-westfälische Sprengstoff-Aktien-Gesellschaft," in Cologne, with a capital stock of 4,000,000 marks ($952,000); the Sprengstoff-Aktien-Gesellschaft Carbonit," in Hamburg, with a capital stock of 1,600,000 marks ($380,800); the "Sprengstoff-Aktien-Gesellschaft Cosmos," in Hamburg, with a capital stock of 1,200,000 marks ($285,600); the "Erzgebirgische Dynamitfabrik-Aktien-Gesellschaft," in Geyer, in Saxony, with a capital stock of 1,000,000 marks ($238,000).

Each of the plants named as composing the photographic-paper and the dynamite trusts is apparently operated independently of the others, and there is no board of managers directing the whole, as least so far as is made public, but the gross earnings are pooled and divided by a given percentage, which is the subject of special agreement.

While the system has prevented competition and marked reductions in prices, it has not, on the other hand, greatly enhanced profits or prices above a fair, reasonable return for the capital invested. Wages have been steady, and it is said the formation of these trusts has been beneficial to the laboring man, by furnishing steady employment and good pay. There seems to be general satisfaction among the working classes in all branches of manufacturing at Dresden and vicinity.

I inclose annual reports for the year ending December 31, 1899, and also copies of the by-laws of such concerns forming part of the photographic-paper and the dynamite trusts as I was able to obtain.[1]

In addition to the indisposition of the German to give us information about manufactures or business generally, trade syndicates and the trusts I have named are of course anxious to keep their business private, and it was difficult to obtain the meager information contained in the above report.

CHAS. L. COLE, *Consul-General.*

DRESDEN, *June 1, 1900.*

FRANKFORT.

Trusts, in the American sense, where individual establishments are sold to one large corporation in which the former proprietors are only stockholders, do not exist in Germany.

On the other hand, there are few industries in this country the members of which have not united for the purpose of promoting their interests. They are to buy raw materials at the best possible prices; to reduce, if possible, the cost of production; to prevent overproduction; to regulate prices; to obtain larger profits.

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[1] Filed for reference in Bureau of Foreign Commerce.

Industries which have not yet united are doing so at a rapid rate. One can hardly take up a newspaper without finding mention of the formation or the reformation of a trust, called by different names, viz. ring, syndicate, cartel, association, etc. Not only the manufacturers combine, but also the wholesale dealers and retail dealers and the consumers, the employers of labor and the employees.

The members of the larger industrial trusts usually enter into an agreement for a term of years. They put up forfeit money, which is lost in case of violation of their pledges not to buy raw materials from certain parties; not to sell to certain parties; not to sell below a certain price, etc.

The associations usually have a confidential man, a secretary, who collects information of benefit to the members and notifies individuals. He enters into contract for the supply of raw materials, carries on all correspondence with the members and with firms who have not yet joined, and devotes his entire time and energy to the interests of the association.

In the Frankfurter Zeitung of May 8, I find references to the "Verband der Metallindustriellen" (association of the metal industrials), to the "Bund der Landwirthe" (union of farmers), to the "Zucker Kartell" (sugar trust), to the "spiritus ring" (whisky trust). There appears a notice in the same issue about the raising of prices by the job printers, stating that those of Germany have just formed a union 7,000 strong, for the purpose of bringing about an advance in prices of from 10 to 15 per cent. In another issue, I note that the membership of the soap trust of Germany is now about 700. This trust, like the coal trust, the metal trust, the cement trust, the paper manufacturers' trust, has a very complete organization. They try to prevent outside firms from supplying themselves with raw materials. The paper trust, which has raised the prices of paper, is met by a trust of consumers of printing paper.

At the general meeting of the association of German publishers of newspapers, held at Leipzig in May, it was determined to at once enter upon the erection of paper mills, the capital to be raised by stock subscription on the part of the members.

A committee was appointed to call a meeting at Berlin, to which publishers of large newspapers not belonging to the association should be invited, and to report at what places in Germany paper mills on a large scale could be best located.

The central office at Hanover receives subscriptions for stock. Many publishers, representing a yearly consumption of more than 90,000,000 pounds of printing paper, have declared their intention of subscribing for stock.

Under date of May 14, I find that the German sugar syndicate and the syndicate of German sugar refiners announce the accomplishment of what they call "the sugar cartel."

It is the tendency of the times for people in the same business or trade to combine for mutual benefit. The effect of such combinations upon prices is always an increase; at least I have so far not heard of a diminution. The amount of production is usually curtailed, as has been emphasized especially within the last year in the coal industry.

The coal ring is said to prescribe to its members how much they can produce. The output goes into the common pool, and the individual mine owner can sell only to the pool. The ring fixes the prices arbitrarily. The result has been that large consumers of coal, like iron producers, are buying their own mines, so as to be independent of the ring.

RICHARD GUENTHER,
Consul-General.

FRANKFORT-ON-THE-MAIN, *May 17, 1900.*

SUPPLEMENTARY REPORT.

The following article in Kuhlow's German Trade Review and Exporter, Berlin, May 16, 1900, shows that the syndicates are not confined to the limits of Germany, but are becoming international:

GERMAN IRON TRADE SYNDICATES.

The syndicates of the German iron trade are not less powerfully organized than those of the coal trade, but their functions are not quite so well known. However, as the object of all selling associations is identical, and they all have the selfsame difficulties to encounter, we need only give a rough outline of their organization.

Of course, the aim in view is to prevent undue competition by a mutual understanding as to prices, and for this purpose to concentrate the sale of the common output in the hands of a managing committee, which distributes the orders received among the associates, and at the same time endeavors to regulate production so that it may theoretically correspond to the demands.

The six principal syndicates of the German iron trade are the pig-iron syndicate, the ingot and billet steel syndicate, the girder syndicate, the wire-rod syndicate, the plate syndicate, and the drawn-wire syndicate. The consolidated pig-iron syndicate has its head office at Düsseldorf, and represents three subsidiary syndicates, the Rhenish-Westphalian syndicate of Düsseldorf, the association for the sale of pig iron of the Siegerland, with its offices at Siegen, and the Comtoir of Lorraine and Luxemburg. The foundation of the consolidated syndicate in its present form dates from the year 1897. Prior to that time, there existed only certain undertakings between the different producers; but these agreements, of a more or less lax character, without any well-defined principles or definite authority, were easily evaded. The Rhenish-Westphalian syndicate dates from 1894, that of the Siegerland from 1896, and the Comtoir of Lorraine and Luxemburg likewise from 1896.

The ingot and billet steel syndicate (Halbzeug Verband) existed in the year 1897 under the form of an association, the functions of which were exclusively to control the selling prices of their products. The following year it assumed a more definite organization. Its seat is at Düsseldorf, and it represents the steel works of the Moselle, the Saar, Luxemburg, the Rhine, and Westphalia. The works recently erected at Luxemburg, at Rombach, Differdingen, and Aumetz are independent, and they have established among themselves a separate association, the director of of which resides at Coblenz.

The girder syndicate has its head office at Düsseldorf, in the same building as the steel syndicate. It was constituted in the year 1899, and, like the pig-iron syndicate, comprised three sections—the South German girder syndicate, founded in 1884, which is composed of the rolling mills of the Saar district and of Luxemburg, and has its seat at Saarbrücken; the girder syndicate of the Lower Rhine and of Westphalia, with its head office at Düsseldorf, the operations of which extend to the north of Germany, and, finally, the Peine Works, in Hanover, which supply that province and eastern Germany.

The wire-rod syndicate dates from the year 1896, and has its seat at Hagen, in Westphalia.

The plate syndicate has its head office at Essen, on the Ruhr. It was originally established in 1897, and assumed its present form as a limited liability company in 1898.

The drawn-wire syndicate was founded in 1899, and the seat of the association is at Hamm, in Westphalia. Its commercial functions are distributed over four zones, viz: North Germany and the northwest, with an office at Berlin; Saxony, Silesia, and lastly, south Germany, with its bureau at Mannheim. The export business is attended to at Hamm.

When first started, these cooperative selling associations acted with great moderation. As had been the case with the coal syndicate, prices made slight progressive rises, in order not to call forth protests of their customers. The plan of organization resembles that of the coal syndicate. The association appointed a number of experts whose mission it was to visit each of the confederated works and to determine their capacity of production, according to which they were to be participating firms. Subsequently Germany was divided into a number of zones, and the production for each day duly subdivided among the contracting parties. All orders are received by the general manager of the syndicate, and they are divided among the associated works, having regard to the capacity of production, to the quality of the product, and to the conditions of transport. Of course, in this allotment the geographical situation of the respective works must be taken into account, as this plays an important part in the question of determining the mode of transport and the freight charges. In cases where, by virtue of its topographical position, one of the associated works receives orders in excess of its proper quota, the excess is deducted in the allotment of the next quarter. At the end of the year, when the accounts are balanced all around, compensation for the excesses and deficits of production is effected, so that each of the associated works is credited only with the part assigned to it in the table of the allotments.

This rule is subject, however, to certain exceptions. The zones situated on the frontiers of Germany are favored by the syndicate, with the idea of hindering the importation of foreign products. Again, certain export bounties are allowed to those which send abroad their surplus production, the accumulation of which might influence the sales at home, and consequently affect prices. The losses are borne by the funds of the syndicate.

The contracting parties are under obligation to sell their produce to the syndicate. The selling prices are fixed by a mutual agreement of all the associates, as are also the purchase prices. In fixing these prices account is taken, first, of the amount of wages; second, of the cost of the raw material, and last, of the needs of the trade and the quantity of orders on hand.

The general conditions under which the production is sold are settled, and modifications proposed in any particular case must receive the sanction of the general meeting.

Each associated member undertakes to submit unconditionally to the decisions and measures taken by the syndicate. When joining the association, each member has to deposit as a guarantee of the due execution of his obligations blank acceptances, which, in case of a contravention of the statutes, are placed in circulation to the amount of the fine incurred.

The working expenses of the syndicates are covered by a levy, which is fixed by the general meeting at so much per cent on the invoice prices. If the funds thus obtained exceed the expenses, the surplus is divided among the members.

It will be seen that this is substantially a reproduction of the clauses of the coke syndicate and of the Westphalian coal syndicate. There is the same concentration of the sale of the total produce in the hands of the syndicate, the same system of penalties, and the same omnipotence of the association over the contracting parties. In indicating the variations in the prices of the products of some of the syndicates, we may take Westphalian forge iron, which in 1897 and 1898 was quoted at from 57 to 59 shillings ($13.87 to $14.54) per ton, and last year was sold at from 60 to 65 shillings ($14.60 to $15.81). In the contracts running for the first half of 1900 the price is 68 shillings ($16.54), and in those for the second half 78 shillings ($18.98), with reservation of increase in 1901.

It is doubtless true that the value of coke has gone up to a considerable extent, and likewise the wages of the workmen have increased. But the rise in the price of a product may also be the cause of an increase in that of the raw material. This is what happened in the case of pig iron. In view of the rise, the iron-ore syndicate determined to have a share of the extra 10 shillings ($2.43) stipulated for in the second half of 1900, and on February 1 last the price of ore to be delivered in 1901 was increased 2 shillings 6 pence (61 cents) per ton for crude and 3 shillings 6 pence (85 cents) for roasted ore. The question now is whether this is to be made the ground of another rise in the price of pig, and as a necessary consequence in steel and girders.

Before concluding this side of the subject, we must mention the compact which the German wire drawers have just concluded with their Austrian colleagues, with the aim of preventing a commercial struggle for the interior markets. The argument applies both to drawn wire and to wire nails, and similar arrangements between the coke syndicates of Germany and Belgium are in existence. It will be seen, therefore, that the syndicates have already inaugurated the era of international commercial conventions.

The association of German salt works has raised the price of table and other grades of salt 15 per cent.

The alcohol trust is endeavoring to control the retail prices also. The trust promises to advertise for retailers who will obligate themselves to sell a liter of alcohol for burning purposes at 32 pfennigs (7½ cents).

Twenty manufacturers of plush at Elberfeld have associated themselves.

The association of marble manufacturers has agreed upon an advance in prices; also the rubber syndicate. The sugar trust will not execute orders for two weeks, till a further advance in prices has been fixed.

A somewhat remarkable official communication has been published in the North German Gazette, and circulated throughout Germany. The article appears to be mainly directed to the coal and iron trades. It points out that the industrial development of Germany has exceeded all expectations, and, notwithstanding the continued increase in the production of coal and iron, it is impossible to satisfy the demand. With the enlarged demand, the danger increases that producers may advance prices out of all proportion, and then the country will reach a point equally perilous for producers and consumers. The communication suggests that the only remedy lies in the observance of moderation in all industries. The syndicates are requested to take up a firm attitude, and not to allow the interested circles behind them to force them to increase prices by leaps and bounds.

The consumers of cotton yarns are agitating the question of forming an association for the purpose of buying their supply of yarns, in order to counteract the increase of prices fixed by the ring of yarn weavers, by making contracts either with German spinning establishments not belonging to the ring or with English spinners.

RICHARD GUENTHER,
Consul-General.

FRANKFORT-ON-THE-MAIN, *June 7, 1900.*

PETROLEUM MONOPOLY IN GERMANY.

It is reported in German papers that the four agencies of the Standard Oil Company—the Mannheim-Bremen Petroleum Stock Company, Rieth & Co., The German American Petroleum Company, and the American Petroleum Company—have agreed upon a plan for the complete monopoly of the sale of petroleum. The cooperation of the dealers in petroleum is sought on different pretexts. The dealers are promised to be furnished, free of charge, with reservoirs to store the oil conveniently, but these are to remain the property of the company and can be disposed of at their pleasure. The demand of the dealers that they should be left free to procure their petroleum, as heretofore, from whom they please, was refused and an open contest between the dealers and the monopoly has resulted. The dealers secured the support and aid of the old firms with which they have been trading heretofore, and which are closely connected with the American Pure Oil

Company and the Russian firm, Carl W. Gehlig of Hamburg, and agreed to procure the tin reservoirs at their own expense, this involving no heavy expense. The monopolists, surprised by this action, state that it has not been their intention to coerce the dealers, and that they would furnish reservoirs unconditionally. The dealers, however, fear that after the installation of the reservoirs, locks for fastening them will follow, and cite a letter which the Americano Petroleum Company a short time ago addressed to the "association for the protection of trade and commerce" of Ludwigshafen on the Rhine, which association has very successfully waged war against the monopolists. In this letter, the following sentences appear:

> It has been proven that some customers, some even on a large scale, have used our reservoirs for storing and selling petroleum bought from our competitors. Against such action we can only protect ourselves by locking the reservoirs, as it is not possible to otherwise exercise any control.

The dealers look upon this control, especially of prices, with great disfavor, for only by preserving their independence did they succeed during the last year in buying petroleum at 6 pfennigs (1.43 cents) per liter, below the monopoly price. The increase in the price of petroleum in 1899 was 7 pfennigs (1.66 cents) per liter, aggregating for the annual consumption of Germany 120,000,000 liters, 84,000,000 marks ($20,000,000). How much more the price would have been increased if through the system of locked reservoirs all competition had been stifled, can only be conjectured. Several hundred reservoirs are on hand, but so far it has not been possible to break the opposition of the dealers.

RICHARD GUENTHER,
Consul-General.

FRANKFORT-ON-THE-MAIN, *July 11, 1900.*

HAMBURG.

I have used my best efforts to obtain full and reliable information upon the subject in question, but I must confess that I have been only partly successful. It is a fact that there exists in Germany a marked tendency to the formation of trusts, cartels, or syndicates. Of such trade combinations, about 250 were counted in 1896, one quarter each in the chemical and iron industry, one-sixth in the industry of earth and stones, and one-ninth in the textile industry. To-day, this number is considerably higher, and the separate combinations have grown stronger and more powerful. Besides, the fact that German industry is interested in more than forty international cartels (1895) is of great importance.

In this consular district there is only a small number of industrial establishments actively interested in trade combinations, especially in the lines of a few dynamite explosives, cement, spirit, and sugar.

A complete and reliable list of all trusts, syndicates, and other trade combinations in Germany can not be obtained, as no official record is kept of the same, and such a list, as far as I could ascertain, never appeared in print. It is, furthermore, difficult, if not impossible, to obtain authentic information about the organization and conduct of such unions. Most of these cartels are less a combination of capital than simply an agreement between the separate establishments for the regulation of prices and distribution of the orders received among the associates. From the Chamber of Commerce of Hamburg, I could not obtain any information whatever, but was referred to the commercial library of this city. I found, however, that the latter did not contain many literary works which could give a correct idea of the character and effects of the cartels, without exhaustive investigation. The "Verein für Social Politik" (Society for Social Policy), a few years ago, studied this matter and published many facts worth knowing. Volume 59 (published in 1894) of the publications of said society contains fifteen descriptions of German and foreign cartels, with a number of statutes and supplements. Volume 60 (published in 1895) contains a number of reports on the same subject, adopted during the meeting of that society on September 28 and 29, 1894, at Vienna. Both books are thick volumes and undoubtedly contain much information of interest; but it is evident that a consular officer does not have opportunity to properly digest and present this sort of information, as it would require more time than he has at his disposal to draw therefrom a clear and accurate picture of the management and effects of the cartels. It might be mentioned that the persons who have devoted much time to the study of this subject for the "Verein für Social Politik" admit themselves that they had hardly ever undertaken a more difficult and troublesome problem. All cartels are secretive in every manner, and have simply refused to give information, thereby rendering investigations nearly impossible. W. Bredow, who has also thoroughly studied this subject and written a book entitled "Die Unternehmer Kartelle und der Weg zum Wirthschaftlichen Frieden" (The Enterprisers' Cartels and the Way to Economical Peace), says on this point:

> In any event, it is difficult, if not impracticable, to distinguish one from another (syndicates, cartels, pools, trusts, etc.), and to give reliable data. The cartels have hitherto thrown a more or less impenetrable veil over their action and working methods. Even the "Verein für Social Politik," in its endeavors to throw light on all subjects touching upon national economy, has scarcely anywhere else met with as little reciprocity as from cartel enterprises. As a deeper insight into the effects of such combinations seemed to be unobtainable, the committee of that society requested them in a circular to at least allow an examination of their statutes. The result of that circular, addressed to about forty German cartels, was nearly equal to naught. The answer of the majority was simply that it would be impossible.

As I anticipated, my efforts were not more successful. After I failed to obtain the necessary information from official sources, I was obliged to apply to private persons. Those not interested in any trade combinations were entirely willing to render me assistance, but the greater part of information thus obtained was so meager that to report the same would only give a wrong idea of the character of the different cartels. Moreover, it must be taken into consideration that Hamburg is not exactly an industrial center and that no trust or other trade combination has its seat here. As stated above, few establishments in this consular district are interested in cartels, but the actual seats of the respective cartels are elsewhere. Under the circumstances, the consular officers stationed in the industrial districts will better be able than I am to report on this subject. However, I deem it proper to transmit to the Department all information I could obtain.

Of course, the aim of all cartels and syndicates is to prevent competition and to obtain the highest and most regular prices for their products, and orders are distributed in many syndicates so as to regulate production.

The Nobel Dynamite Trust Company (Limited) was formed in 1886 by converting the stocks of the Nobel's Explosives Company (Limited) of Glasgow, Dynamit Actien Gesellschaft, vorm. Alfred Nobel & Co., of Hamburg, Rheinische Dynamit Fabrik of Opladen, Deutsche Sprengstoff Actien Gesellschaft of Hamburg, and Dresdener Dynamit Fabrik in Actien of Dresden, into shares of The Nobel Dynamite Trust Company (Limited), seat in London, E. C., 220 Winchester House, 50 Old Broad street. The main purpose of the trust company is to obtain a profit equal on an average for all establishments interested in the enterprise. This is especially of importance in explosives establishments because of the great possibility of accidents, which could easily lead to disturbances and damage. With the factories of gunpowder, Vereinigte Rheinisch-Westfälische Pulverfabriken of Cologne, Pulverfabrik Rottweil-Hamburg of Rottweil, Cramer & Buchholz of Roensahl, and Wolff & Co. of Wallsrode, a cartel agreement was made, which went into force in 1899 and runs until the end of 1925.

Dividends of the "Dynamit Actien Gesellschaft, vorm. Alfred Nobel & Co.," were in 1876–77–1885–86, 12, 10, 13.5, 12, 12, 10, 14, 11, 6.5, 13 per cent per annum, 1886, 11, 7.5 per cent per annum; 1887–98, 17, 16, 9, 20, 14.5, 21.5, 21.5, 20, 16, 13, 15.5, 20 per cent per annum. The dividends of other factories are not published.

Valuation of stocks end of the years 1886–1898, was 104.75, 87.25, 97, 174.25, 162.10, 134.70, 133.25, 128.25, 148.90, 149, 194.10, 174.40, 178.75 per cent.

Inclosed I send the report by the directors of the Nobel Dynamite Trust Company, Limited, and accounts for the financial year ending April 30, 1900.[1]

It was an impossibility for me to obtain the desired information as to the value of the different plants, for the reason that they are entirely under self-management and not in any manner controlled by the trust company. The director of the "Dynamit Actien Gesellschaft, vorm. Alfred Nobel & Co.," with whom I had a lengthy conversation, expressed willingness to render me assistance in preparing this report, but as the affairs of his business, as a matter of principle, had to be kept entirely secret, he was unable to give me any information as far as his company was concerned. I would willingly have taken the trouble to make an extract from the last year's volume of the Hamburger Waren Preiscourant, a paper issued weekly in this city, giving the current prices of a large number of different kinds of merchandise, but the director of the Dynamit Actien Gesellschaft called my attention to the fact that the prices as therein given are not permanent. The director further said that his company could, under no circumstances, raise the prices of its produce too much, as in such an event it would have to fear competition from some outsider selling at lower prices. Through the combining of all manufacturing establishments and distribution of labor, profit, and loss, the goods can be sold profitably at comparatively low prices. The dynamite trust company has, furthermore, agreements with other European and foreign manufacturers of dynamite and other explosives, so that it is at present entirely protected against any competition. The tenor of such agreements, however, is kept secret.

With regard to wages paid for labor in the different plants of the dynamite trust company, it is not possible to give an exact schedule, as the same depend entirely upon the amount of labor available. The men, as a rule, are engaged in contract work, and thus sometimes work extra hours, and have less employment in the dead season. On the average, laborers in German dynamite factories earn from 50 to 100 per cent more wages than other workmen.

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[1] Filed for reference in Bureau of Foreign Commerce.

A few weeks ago, a syndicate of the German manufacturers of raw sugar and sugar refineries was formed at Magdeburg, the center of the German sugar industry, which was entered by nearly all German sugar factories and refineries. A combination of capital, however, did not take place; the purpose of the formation of the syndicate was simply to fix an inland price for raw sugar high enough to render fair remuneration to all associates.

The inland price of raw sugar has been fixed at 12.75 marks per 50 kilos ($3.03 per 110 pounds), and it is agreed that refineries can buy raw sugar only from factories in the cartel. The effect of this will be to raise the retail price of sugar in Germany, but it is not intended to interfere with the export business in any manner.

I was able to obtain a form for a "zucker schlussschein" (contract of sale), as prescribed and used by the sugar syndicate. The same contains the terms of the cartel under which purchases are to be made and a complete list of all factories of raw-sugar refineries which have become members of the syndicate. Inclosed I send a copy of such "schlussschein," which might be of interest.[1]

I further inclose a copy of an article contained in The Iron and Coal Trade's Review of March 30 last, entitled "The German iron trade syndicates."

Although the plants belonging to this syndicate are situated outside of my consular district, I deem it my duty to transmit the said article, as it contains some interesting facts about the organization of this syndicate.

Other powerful syndicates in Germany are those of the spirits, yeast, coal, gunpowder, tin and iron plates, cement factories, etc. Furthermore, there exists a trust or syndicate between the German and Belgian manufacturers of plate glass.

Although it might seem that the number of trade combinations in existence in this country is rather large, it must be taken into consideration that most of these combinations have for their purpose only to regulate prices and distribute orders, without accumulating separate capital. What their reason is for keeping their business matters secret I can not say; it may be that they fear the enactment of a law which would interfere with their enterprises and cause an increase of taxation.

HUGH PITCAIRN, *Consul.*

HAMBURG, *July 9, 1900.*

MAGDEBURG.

In this section of central Germany there is at present a marked tendency in favor of industrial centralization. Almost daily the newspapers contain notices of such combinations. The tendency, however, seems to be less toward the establishment of great trusts, which have for their object the suppression of trade competition for the advantage of individuals at the expense of the public, than toward the formation of cartels and syndicates for the protection and development of individual industries. These cartels are merely producers' unions, which, it is true, restrict competition among their members for the purpose of securing fair prices for all concerned, but nevertheless leave such individual firms a considerable amount of independence. Associations of this kind have consequently no capital of their own, nor do they in most cases themselves engage in trade.

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[1] Filed for reference in Bureau of Foreign Commerce.

The new so-called sugar trust, for instance, is an organization whose membership comprises nearly all the sugar factories of Germany. Its sole object appears to be to defend the German sugar industry against foreign competition and to maintain or increase its profitableness, and thus secure its continued existence. If it goes no further than this, its effect will probably be advantageous to all directly concerned, without causing serious inconvenience to the consuming public.

Similar combinations have recently been effected by German candle makers, producers of alcohol, etc. In order to regulate trade and keep it on a healthy basis, these organizations frequently decide to fix a standard for prices or to restrict production temporarily. For instance, members of the International Mirror Glass Syndicate recently agreed to lessen their production 10 per cent for a period of six months.

One of the most important articles produced in the vicinity of Magdeburg is potash. The various firms interested in this industry decided several years ago that united action would be advantageous to them. They accordingly agreed to establish a sale syndicate, which is known as the "Verkaufssyndikat der Kaliwerke." This plan has been found entirely satisfactory. The membership of the syndicate is made up at present as follows: Royal Berginspection, Stassfurt; Ducal Salt Works, Leopoldshall-Stassfurt; Consolidated Alkali Works, Westeregeln; Salt Works Neustassfurt, Stassfurt; Aschersleben Potash Works, Aschersleben; "Ludwig II" Works, Stassfurt; Vienenburg Potash Salts Works "Hercynia," Vienenburg; German Solvay Works, Bernburg; Tiedershall Stock Company, Thiede; Wilhelmshall Works, Anderbeck; "Glueckauf" Works, Sondershausen; Hedwigsburg Works, Neindorf, near Hedwigsburg; Burbach Potash Works, Beendorf.

This syndicate has no capital, its activity being restricted exclusively to selling various potash products for account of its members. It is claimed that the founding of the syndicate has had no direct effect on prices, wages, etc. The prime object of a union of this character is to lessen expenses connected with the selling of the products of individual firms. Instead of each firm maintaining for this purpose a corps of clerks, accountants, salesmen, etc., it merely bears its proportional share of the expense of one central selling syndicate. In like manner, expenses in foreign countries to which sales or consignments are made are lessened by the selling syndicate having a single agent to attend to the entry and distribution of all wares delivered for the interested firms at the port where he is located.

GEO. H. MURPHY, *Vice-Consul.*

MAGDEBURG, *May 18, 1900.*

MAINZ.

To my knowledge, trusts or trade combinations in the American sense—that is, the union of various separate companies in a certain industry into one combination—do not exist in this country.

On the other hand, however, almost every industry in this country is controlled by a trust or pool, in which each company preserves its entire independence as regards method of manufacture, etc., the trusts merely tending to regulate the output and the selling prices; and members of such trusts are pledged not to sell below certain fixed prices on pain of forfeiting a certain sum of money paid into the pool by every member as a guaranty of good faith.

The glue manufacturers of this district, for instance, have formed a trust to regulate the selling price, and especially to secure to the manufacturers the very lowest prices for raw material. This is accomplished in the following manner: To each manufacturer is allotted a special district in which to purchase his raw material, and no manufacturer is permitted to buy in another's district. This reduces the demand for the raw material to one party, who can consequently buy very advantageously. The leather tanners, I am told, have a similar arrangement.

These trusts are formed only for the benefit of the manufacturers and not for the consumer, and tend rather to increase than diminish the prices.

Of course I can only speak of this district, and in other districts other customs may prevail.

WALTER SCHUMANN, *Consul.*

MAINZ, *May 7, 1900.*

MANNHEIM.

So far as I can learn, no trusts or trade combinations exist here except a branch office of "The Rhenish-Westphalian-Coal-Syndicate," which is composed mainly of capitalists at Cologne and other points in the vicinity of the Ruhr coal fields. This syndicate practically controls the coal supply of Mannheim and the adjacent region. Considerable complaint is heard here as to raising prices of coal and other exactions on the part of the syndicate, in such as long-term contracts with consumers, the exclusive use of the syndicate's coal, etc. The syndicate claims that prices are not materially increased and that the increase is merely the natural result of the large demand for coal and the limited supply in the German fields.

The largest competing industries in this consular district are the bicycle industry, represented by six or seven factories; the chemical industry, represented by eight or ten factories, and the brewing interests, represented by many large breweries. So far as I know, all these concerns are independent of any combination in their respective fields.

H. W. HARRIS, *Consul.*

MANNHEIM, *June 22, 1900.*

NUREMBERG.

But few trade combinations exist in my consular district. Those that have been formed have various objects—for instance, to regulate working hours, to avoid overproduction, to keep up prices, etc.

The following is a list of the same:

GOLD-BEATER INDUSTRY OF NUREMBERG, FÜRTH, AND SCHWABACH.

The masters have formed a trade combination to regulate working hours and wages paid to workmen, to make standard prices, to protect the interests of the manufacturers in strikes, and to avoid overproduction. As an instance of the latter, I would mention that a few weeks ago, on account of many of the manufacturers having large stocks, the combination resolved to close every factory for a fortnight. This was done and the workmen received a certain indemnity from the funds of the combination, amounting to about $1,500, which, on an average, was about one-tenth of the ordinary wages.

GAS-BURNER INDUSTRY.

There are only seven manufacturers of gas-burners in Germany, located either here or at Wunsiedel, Bavaria, this latter being the only spot in Germany where good steatite material for gas-burners is found. The names of these firms are: Lauboeck & Hilpert, in Wunsiedel; J. Von Schwarz, Jean Stadelmann & Co., G. Iondorf, Wilhelm Hoffmann, Adam Weber & Co., and Georg Rauber, in Nuremberg.

They have made an arrangement to sell at increased prices, and only allow certain manufacturers to sell to certain countries. For instance, only J. Stadelmann & Co. and J. Von Schwarz are allowed to sell certain acetylene gas-burners to France; G. Iondorf and Wilhelm Hoffmann are not allowed to sell any goods to the United States for a period of about five years, etc.

LITHOGRAPHIC-STONE TRADE.

There exists no written agreement, but the exporters and quarry owners about one year ago came to an understanding not to sell below certain standard prices. Since that time business is more profitable, though it can not be called excellent. The fact is that the inhabitants of Solnhofen, Bavaria (the only place on earth where good lithographic stones are found), have not yet realized what a monopoly they practically possess. There being no competition, they might ask any price for their stones.

BEVELED-GLASS INDUSTRY.

The Verkaufsbureau der Vereinigten Facettirwerke (Institute of the Amalgamated Beveled Glass Works, Limited) was formed November 20, 1898, at Fürth, Bavaria, to regulate prices for beveling glass plates. It includes the following firms, all at Fürth: N. Wiederer & Co., Winkler & Kütt, Max Offenbacher, Wehrle & Co., Joh. Hohlweg, Hönicka & Vincentz, Ludwig Schienerer, Xaver Pönn, Conrad Rahm, and Leonh. Winkler.

The rates of discount on their standard tariff prices have been recently fixed as follows: On 3/4 white mirror glass plates, English measure, 45 per cent; on 3/4 white mirror glass plates, Rhenish measure, 40 per cent; on 1/1 white mirror glass plates, Rhenish measure, 40 per cent, net cash. Any order, inquiry, or payment addressed to any of the above-mentioned firms is referred by them to the aforesaid institute.

GUSTAV C. E. WEBER, *Consul.*

NUREMBERG, *May 31, 1900.*

PLAUEN.

Trade combinations, known in Germany under the name of syndicates or cartels, have been under consideration by the political economists of Germany and Austria for years without any practical solution as yet having been reached.

Trusts, such as are known in America, do not exist in Germany; here they have only reached the syndicate stage. Both forms of combination have the same aim, but the American trust has a much stronger financial position, as it owns the property of its members, while the German syndicate may break into a hundred parts at any time and every member return to the individual management of his own property.

There are in Germany hundreds of these syndicates; I have only taken seven as examples.

The German rolling mill syndicate, the Bavarian plate glass syndicate, limited, the united brush syndicate, of Nuremberg, the united ultramarine syndicate, the central wood pulp syndicate of Germany, the Rhenish Westphalian coal syndicate, and the German kali, or potash syndicate.

In regard to the working and organization of these syndicates, it is impossible for me to gather any information. The officials of the Government know nothing, or if they do will not tell it. The secretaries of the chambers of commerce have absolutely no data; writers on political economy, as they themselves admit, can find no accurate information.

The general assembly of political economists in Vienna, in September, 1894, debated the subject, the opinion being expressed that syndicates are the inevitable consequence of the existing conditions of trade; that their formation can not be hindered without grave infringements upon the rights of the people; that the Government can interfere with such syndicates only where it is absolutely proved that the general public are suffering. Not one of the delegates brought forward a plan of how the Government should intervene to protect the public and control the syndicates.

It is true that in Prussia, the Government has the power to intervene in case the German potash syndicate advances the price to an abnormal extent, according to Dr. Ofeler, who further stated: "In Austria, the Government has the right to demand an inspection of the books of the syndicate, and if such inspection proves that the general public suffers by such syndicate, the Government can annul it."

The only possible manner, it would seem, in which we can solve the problem of the value or detriment of the syndicates in Germany is to make a minute history of their business life from the time of their formation, but such a work is impossible in a consular report. There is one point, however, to which I would call attention.

Germany has during the last thirty years made the most wonderful strides in manufacture, arts, and riches; the price of labor has materially advanced; the comfort of all classes is greater by 100 per cent. The above facts can be easily proved by statistics.

If the syndicates had been a direct detriment to the people of the country, would they not have impeded this general advance of prosperity, and would not the German Government have made laws ere this to control or abolish them?

It is quite possible that the German syndicates make greater personal profits by their amalgamation, in decreasing the cost of production and general expenses, and yet deliver their articles to the people at a less price and even, as statistics prove, pay more to their workmen.

The general evidence would seem to be in favor of the syndicates.

The opponents to this argument may say, "But would not the prosperity of Germany have been even greater if these syndicates had not existed?" That is based upon a supposition; while the progress and well-being of Germany are statistical facts which can not be disputed.

THOS. WILLING PETERS, *Consul.*

PLAUEN, *June 22, 1900.*

SOLINGEN.

About the year 1880 a trust system, clearly defined, made its first appearance in Germany. All the concerns manufacturing railroad materials in Germany formed a big combination, making the bids for railway contracts uniform and a good deal higher than bids submitted to foreign railroads. At the same time the supply was held by mutual contract at certain limits, in proportion to the capacity of each factory, in order to avoid any possible overstocking, which might become dangerous to the financial stability of the trust (called "syndicate" in Germany).

This first attempt to force the consumers to pay disproportionate prices proved a splendid financial success for the producers and the plan has found ready followers in almost every branch of German industry and commerce. This being a new feature in business matters, it naturally attracted the attention of economists, and there exists to-day a whole library of literature on this question. The matter has been brought up in the Reichstag and warmly discussed, but no law has been enacted.

The wages of the workingmen are very little affected by the forming of these syndicates. The syndicate contracts usually have a clause by which the strikers of one factory are peremptorily excluded from all the other factories of the combination, but this applies only to strikers for higher wages and does not protect any employer in cutting the wages of his employees.

Cutlery is the main industry in the Solingen consular district, but no trust in this line exists here. There are hundreds of small cutlery factories which have been for many generations in the hands of one family and do not conduct any direct business with outside consumers, but work for exporters. All the brickyards in this section, some thirty in number, doing business at Solingen, Wald, Graefrath, Hoescheid, and Ohligs, have gone gone into combination to demand higher prices than are charged by other brickyards in Germany.

EDMOND Z. BRODOWSKI, *Consul.*

SOLINGEN, *May 25, 1900.*

STUTTGART AND WEIMAR.

Vice-Consul Hahn, of Stuttgart, under date of May 10, 1900, and Consul Moore, of Weimar, on April 27, 1900, inform the Department that no trade combinations exist in those consular districts.

NEW TRUSTS IN GERMANY.

The following reports, received at various times during the year 1900 and already published in the Consular Reports, are reprinted here:

SOAP TRUST.

Under date of January 29, 1900, Consul-General Guenther, of Frankfort, says:

During the summer of last year a trust of the soap manufacturers of the Rhenish provinces, Westphalia, Oldenburg, and Bremen was formed with the object of establishing uniform prices for soft soap. The intention was to extend the trust so as to embrace all the German manufacturers of soap, and soon those of Hesse, Hesse-Nassau, and the Palatinate joined, and uniform prices were also established for hard soap, which resulted in an advance of about 14 per cent over former rates.

In the endeavor to force all manufacturers to join the trust, certain methods were employed which have been made the subject of legal proceedings. It is alleged that manufacturers who did not join were boycotted.

Essential raw materials for the manufacture of their products are palm oil and potash lye. The number of importers of palm oil and of manufacturers of potash lye is limited, and efforts were made by the trust to enter into an agreement with them not to sell to soap manufacturers who were not members.

These efforts were directed mainly against the association of soap manufacturers of Stuttgart, who proved important competitors. The association was invited by the trust to join, under favorable terms; on its refusal it was threatened that it would be deprived of raw materials. In a circular of the manager of the trust, it was stated that for the suppression of competition a remedy had been tried which promised to be entirely successful. It was soon demonstrated what was meant, as all palm-oil dealers refused to sell to the Stuttgart association, although many of the firms comprising the association had for years dealt with them. Some of these palm-oil dealers stated openly that the soap trust had prohibited them to sell to the Stuttgart association.

The same method was tried with reference to potash lye, but was less successful, for the association succeeded in making contracts covering the year 1901.

Complaint has been lodged against two of the directors of the trust with the prosecuting state attorney at Stuttgart, and the decision of the court will be of great interest.

On April 5, Mr. Guenther reports that 85 per cent of the German soap manufacturers have joined the trust, and the rest, it is said, are to be coerced into it by underselling or by cutting off the supply of raw materials. A union of consumers is recommended as a counter remedy.

SAFETY-FUSE TRUST.

The following, dated January 27, 1900, is from Consul Warner, of Leipzig:

The eight safety-fuse manufacturers of Germany and the one of Belgium, at a meeting in Berlin on the 20th of October, 1899, formed what may be called a safety-fuse trust, which went into effect on the 1st day of January, 1900. These manufacturers have been compelled to take this step in order to protect themselves as a result of competition. The idea of pooling their interests was not a new one with them; indeed, they were only perfecting a plan which was started in 1880, when they entered into an agreement not to sell fuses except at uniform prices. First one manufacturer and then another broke the agreement in their efforts to secure orders, until in 1893 the manufacturers declared war upon each other, with the result that fuses were in many instances sold below the actual cost of production.

This state of affairs practically continued until the first of this month, when, as I said before, the new trust went into effect. Now, fuse manufacturers are confident that there will be a return of good times and of their ability to make handsome profits, whereas heretofore they have been compelled to run their factories at a loss.

The trust does not fix the market prices for fuses in all countries. In the United States, Mexico, Italy, Africa, Russian Poland, and England, they can be sold without regard to the prices which have been fixed by the trust. This is, of course, in order to allow German fuse manufacturers to compete with those of other countries.

As an immediate result of the formation of the safety-fuse trust, the prices in Germany have advanced about 25 per cent since the first of the year.

BANDAGE TRUST.

Consul-General Guenther sends the following from Frankfort December 16, 1899:

Recently, the German manufacturers of bandages met at Berlin to form an association. It was also proposed to establish a supervision of the production by medical officers of the Government, so that complaints from physicians, dealers, and the public might be avoided.

BISCUIT TRUST.

Consul Worman, of Munich, under date of May 1, 1900, reports that the biscuit and cake manufacturers of Germany have formed a trust and fixed minimum prices for unpacked goods ("Nakte Waare"), common biscuits ("Volksbisquits"), and Albert cakes, to rule the whole industry in Germany.

GREECE.

Consul McGinley writes from Athens, June 23, 1900, that after diligent and widespread inquiries he has failed to find any trade combination in his consular district.

Consul Darte, of Patras, under date of May 10, 1900, says: There are no trusts or trade combinations, properly speaking, in this district. The Greek Government, however, retains the power to manipulate the sale of salt, petroleum, and tobacco.

Salt and tobacco are found in Greece in considerable quantities, while the greater portion of the petroleum comes from the United States.

ITALY.

MILAN.

Trusts or trade combinations, such as exist in the United States, have not as yet obtained foothold in Italy. The nearest approach, perhaps, is the "Siderurgia Italiana," located at Florence, a combination of nearly all the important iron foundries of the Kingdom.

As for this consular district, there has recently been established in Milan a syndicate of cast-iron foundries, which, however, contains neither the most important establishments nor even all of the least important ones. A union of the manufacturers of chemical manures is also established in this city.

However, all these efforts seem to have but a very limited influence on national industries and trade.

If there are other enterprises in this line—and no doubt there are—I am unable at present, even after careful search and inquiry, to give any facts in regard to them.

WM. JARVIS, *Consul.*

MILAN, *June 12, 1900.*

FLORENCE.

My report has been delayed by the slow publication of the reports of the cooperative organizations in this city. These corporations look like molehills in comparison with the mountain trust companies in the United States, and are of little importance in considering the modus operandi of trusts. The object of these combinations is to sell the best quality of articles at the cheapest figure without underselling. It appears, however, that such institutions start with enthusiasm, bloom for a couple of years, and then find themselves in financial difficulties, owing to an excess of stock or to competition.

Such was the history of the following companies, viz:

Anglo-American Supply Stores, Limited, established in Florence, 1895, at 39–51 Via Cavour, with agents in London, J. Coppo & Co., 107 Wood street, Cheapside. Their departments embrace groceries, draperies, cutlery, hosiery, haberdashery, stationery, boots and shoes, china and glass, wines and spirits. The capital amounts to 650,000 lire ($124,450) in shares of 125 lire ($24.12) each. The dividend is only 3 per cent.

"Unione cooperativa di consumo" (the cooperative union of consumption) was established in 1890, chiefly for the benefit of civil employees, but not exclusively. The shares are 25 lire ($4.80) each, and the limit is 200 for a single shareholder. The various departments are similar to those of the Anglo-American Supply Stores, but have chiefly Italian products. The number of shareholders is 1,598 and the capital stock 52,357.05 lire ($9,738.40).

Annual statement, January 31, 1900.

Dr. Cr.

	Lire.*a*	United States equivalent.		Lire.*a*	United States equivalent.
To capital	52,357.05	$9,738.44	By cash	15,538.70	$2,890.19
Creditors:			Goods in stock	192,634.88	35,830.08
Supplies	105,553.46	19,632.94	Furniture	19,074.55	3,547.86
Goods on consignment	21,877.14	4,069.24	Bonds	42.35	7.87
Bills to settle	3,700.00	688.20	Deposits	1,000.00	186.00
Bonds	1,000.00	186.00	Debts to collect	9,251.68	1,720.79
Interest	800.79	148.94	Prepaid expenses	3,459.70	643.56
Sundries	14,875.00	2,766.75			
To provident fund	4,535.36	843.57			
Propaganda expenses	153.03	28.46			
Reserve fund	2,649.60	491.75			
Profit and loss	33,500.33	6,232.06			
Total	241,001.86	44,826.35	Total	241,001.86	44,826.35

a Italian currency equal to $0.186.

"Unione Militare" (military union), the "army and navy stores," having 15,472 members among the Italian army and navy, were established in Rome, with branches in ten of the leading cities in Italy. The public also is allowed the privilege of cooperative prices.

The sales in Florence during the last calendar year amounted to 374,882.50 lire ($69,728), and for the last ten years to 1,146,202.60 lire ($213,193.70).

The value of stock on hand January 1, 1900, amounted to 202,132.50 lire ($375,966.45).

EDWARD C. CRAMER, *Consul.*

FLORENCE, *June 11, 1900.*

CASTELLAMARE DI STABIA.

There is not a single industry operating under a trust or combination in this consular district. Here there is the most intense competition. The result is that manufacturers are forced to sell at a price frequently less than the cost of production, and wages are necessarily very low.

JOSEPH E. HAYDEN, *Consul.*

CASTELLAMARE DI STABIA, *May 22, 1900.*

NAPLES.

Consul Byington, of Naples, under date of May 30, 1900, informs the Department that he has not been able to learn of the existence of any trusts, as understood in the United States.

SICILY

Consul Heingartner, of Catania, May 26, 1900, reports:

There is but one combination of capital in this part of Sicily for the control and regulation of product and prices, the Anglo-Sicilian Sulphur Company, Limited. This company has its headquarters at London; it has an authorized capital of £1,035,000 ($5,036,310), and a paid-up capital of £607,250 ($2,954,878.50); commenced business August 1, 1896, having five-year contracts from that date with mine owners and leaseholders covering about 80 per cent of the total production of Sicily, with the option on the part of the company of renewal for an additional five years, notice of such intention to be made in January, 1901.

Previous to the formation of the Anglo-Sicilian company, the sulphur industry was in a deplorable condition; none of the producers were making money, and the pay of the miners was reduced to a mere pittance. The Italian Government abolished the export duty of 11 lire per ton on sulphur, and in lieu of the company being compelled to pay the usual registry fees for incorporation and the income tax, which would have been over $500,000, imposed an export duty on sulphur of 1 lira (19.3 cents) per ton.

The amount of tonnage to be taken by the company was fixed on the basis of the first year's output of the several mines. Prices previous to August 1, 1896, f. o. b. Catania, were $12.80 for "best seconds" and $12.60 for "best thirds" per ton. The company contracted to pay for the two grades $16.25 and $15.80 per ton f. o. b. Catania. At the other leading centers, prices are somewhat lower.

The company made the selling prices of the two grades in 1896 $18.40 per ton for seconds and $17.45 for thirds, and now quotes at $19.55 and $18.95 f. o. b. Catania.

The managers do not at present control more than 60 per cent of the total production, owing to the opening of new mines and the reopening of mines closed during times of low prices; but on account of the large increase of the world's consumption of sulphur—exports having risen from 384,000 tons in 1896 to 480,000 tons in 1899—they have been able to maintain prices.

The company is now trying to perfect arrangements with outside producers, so that it will have control of at least 90 per cent of the output after August 1, 1901. There is a strong probability of success, as under present arrangements the mine owners as well as the company have made large profits, and the argument of the company is that if it can not have full control, the 170,000 to 200,000 tons it is now compelled to carry to maintain prices will be thrown on the market, and prices will go below those of early 1896.

The mine laborers have had a large increase of wages under the present arrangement. On August 1, 1896, the pay of boys was advanced from 11 and 15 cents to 24 and 27 cents per day, and of men from 27 and 30 cents to 55 and 60 cents per day. As the number employed is between 30,000 and 35,000, the trust was of material benefit, not only to the mining region but to all Sicily.

Consul Caughy writes from Messina, May 8, 1900, that no trusts nor trade combinations exist in his district. A great deal of business is done by Messina merchants with the Anglo-Sicilian sulphur trust, but as they are only buyers and not interested in the corporation, no statistics are available. An effort was made last year to form a combination of the exporters of citrate of lime, but it was not consummated.

Consul Howe, of Palermo, under date of June 20, 1900, writes:

Only two organizations of this character are organized or incorporated in this consular district, viz, the Anglo-Sicilian Sulphur Company, incorporated in 1896. This company owns no sulphur mines nor real estate, but has long time contracts with a majority of the mine owners in Sicily and controls the output. Since the organization of this cooperation the price of sulphur has advanced, and the wages paid to miners have increased accordingly.

The Societa per l'Esportazione dei Sommacchi di Sicilia, I. and V. Florio & Co., which practically controls the output and price of sumac in Sicily, was organized August 1, 1899, with a capital of 1,500,000 Italian lire (about $300,000), and will not declare a dividend until August 1, 1900. It has no capital invested in real estate, being a combination of the sumac producers and manufacturers, who turn over their products to the society for exportation, thereby destroying all competition. Since the organization of this cooperation, the price of sumac has advanced and the wages of the workingmen at the sumac mills have been increased in proportion.

MALTA.

In reply to the circular from the Department asking for information with regard to trusts or trade combinations in these islands, I would say that, as yet, industries in Malta have not progressed to such an extent as to evolve them. The nearest approach, perhaps, is the concern handling Russian petroleum here, which, however, although it enjoys a monopoly of the business, does not interfere with the trade of smaller firms to such an extent as to be termed a "trust." The concern mentioned, E. T. Agius & Co., does an extensive business both in oil and coal, and employs many laborers at the average rate paid to all workmen here, about 50 cents per day.

JOHN H. GROUT, *Consul.*

MALTA, *May 5, 1900.*

NETHERLANDS.

The history of the Netherlands contains many examples of the fact that compromise and combination are alien to the Dutch character. A recent writer on Holland has said: "Save in the one direction of adding to their country, the Dutch are not enterprising. They are ingenious, diligent, laborious even, but they lack expansive energy and ideas. While they have an extensive knowledge of all that is going on in the world and watch it with strong intelligence, their own interests are narrow." Mr. J. M. Robertson, in the lately published "Introduction to English Politics," says, "The most sympathetic historians are forced from the first to note the stress of mutual jealousy as among the cities and districts of the Netherlands. 'The ingrained habit of municipal isolation,' says one, 'was the cause why the larger part of the country was ultimately ruined and why the war of independence was conducted with so much risk and difficulty, even in the face of the most serious perils'.[1] Van Kampen avows (Geschichte der Niederlande, p. 1, 131) that throughout the Middle Ages Friesland was unprogressive, owing to constant feuds. Even as late as 1670, Leyden refused to let the Harle Maer be drained, because it would advantage other cities; and Amsterdam in turn opposed the reopening of the old Rhine channel, because it would make Leyden maritime (Temple, Observations, 1, 130, ch. 111)." The rivalry between the cities of Leyden and Delft respecting establishments to prepare Dutch youth for the colonial service, set forth in Lowell's Colonial Civil Service, is another and later illustration of the excessive manifestation of the spirit of liberty.

Among people of such antecedents one can not, therefore, expect to find a tendency toward consolidation in enterprises in which the individual and even the municipality is lost. Holland is a very decentralized country, politically, and each province and city is to a great degree self-centered and self-governed. In industrial and commercial life, there are no overshadowing combinations with spreading ramifications.

Of course, in these days, when everything is produced on a large scale in the great industrial countries, and hand labor is giving way to machinery, a transformation has occurred here also to some degree, sailing vessels disappearing before steamers and local butter markets before the factories.

The Netherlands, it must however be remembered, is not an industrial but a commercial and agricultural country. Neither in agriculture nor fishing (the chief local employments) is there any tendency toward "bonanza" management, while the world-embracing trade that centers in Amsterdam and Rotterdam is in the hands of numerous people.

The country, though politically independent and composed of burghers and farmers marked in character by extreme individuality, is, from its position as a small state with numerous neighbors possessing great ports, not a separate economic entity, but an integral part of an industrial and commercial web that covers Europe, and more remotely the entire world. The fact that the spirit of its inhabitants is such that combination in any sphere of effort is difficult does not exempt it more than other organisms from the influences of its environment. The Standard Oil Company, in the guise of the American Petroleum Company, running its steamers under the Dutch flag, controls the oil trade. Branches of such corporations as the Continental Bodega Company, for the sale of wines, etc., are found here, as in most other cities of Europe.

A glance at the map suffices to show the relation that Belgium, the Netherlands, and Denmark bear, on account of their propinquity and their possession of fine harbors, to the neighboring body of German States. The commercial relations of the Netherlands and Germany are of the closest, and are promoted by the labyrinthian net of canals joining their territories, as well as by the service of the two railway lines issuing from the Netherlands, which place even Berlin within twelve hours of Amsterdam and Rotterdam. In addition, there is the mighty natural water way of the Rhine, the detritus of which forms this land.

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[1] Tharold Rogers' Holland, p. 26, ch. pp. 35, 43; Motley, pp. 29, 30, 43; Grattan, pp. 39, 50, 51.

So closely are the two countries knit commercially that the realization of such projects as the Dartmund-Ems and Rhine-Elbe canals would affect Dutch ports vitally, Rotterdam, and Amsterdam in great part also, living by their transit traffic. Commercial Relations, 1899, Volume II, may be consulted for precise statements of this and other traffic.

COAL.

The coal trade of the Netherlands is controlled by the Steenkolen Handelsvereininging, with headquarters at Utrecht. This corporation is not a branch of the Westphalian coal syndicate, but is an independent Dutch company. It was established in accordance with the provisions of the act of July 30, 1896, and was authorized to do a general business in steam coal, coke, and steam-coal briquettes, especially with the Rheinisch Westfälisch Kohlen Syndicat. It is to endure until March 31, 1931, and has a capital of 1,000,000 florins ($400,000), divided into shares of 5,000 florins ($2,000), increased in 1897 to 2,000,000 florins ($800,000).

The company has a fixed contract with the German people for the delivery of certain amounts of coal, which have been shipped even during the coal famine prevailing in Germany. It also has contracts with the two railway lines piercing Germany from here, and, although the boat traffic on the Rhine is absolutely free from its control, it has, because of the terms of the contract with the German coal producers and with the railways, established complete domination in the Netherlands. This corporation is plainly not a trust, but a monopoly.

Coal is furnished here at 9½ florins ($3.80) per ton.

PEAT.

The only other monopoly in the Netherlands is that of peat moss, which is exported to England, the output, price, and disposition of which are controlled by one set of people, making it a true "natural" monopoly, to use Professor Ely's classification.

PUBLIC UTILITIES.

What President Hadley (Economics, section 168) calls "distributive services," such as water, gas, street railways, and the telephone—indeed all public utilities except the electric light—have been taken over by the municipality at Amsterdam, the people here having thus adopted the socialistic solution of the problem.

The municipal council passed a resolution in June, 1895, notifying the Imperial Continental Gas Association of its intention to repeal on August 1, 1897, the concession granted to the association. The concession was not withdrawn, nevertheless, until August 1, 1898, when the gas works became the property of the city. The price, which had been fixed at 9 cents per cubic meter by the concession and could not be reduced as long as the concessionaries were in control, was reduced by the city council in 1899, on request of the burgomaster and assessors, to 7 cents per cubic meter.

In 1898, the council revoked the concession granted to the Amsterdam Omnibus Company and took over on January 1, 1900, the work of transportation by tramways, to be under municipal management until 1910. Amsterdam is exceedingly backward in this respect, single horse cars being used, on the front and back platforms of which are standing places for six persons. That Amsterdam, with 525,000 inhabitants, should not have cable or electric traction seems very curious, when one considers its increasingly rapid growth.

While the local telephone system is controlled by the city, the intercommunal system connecting it with different parts of the country has since October 1, 1897, been owned by the State. There is besides the Bell Telephone Company, owned and conducted by private parties.

As to changes in price of service consequent upon the city's entrance into these new fields, I am assured by a competent authority that there has been, generally speaking, no loss, but, in his opinion, resultant gain to the public under the new dispensation. The gentleman who expresses himself thus, besides being a member of our consular body, was at one time director of the waterworks when under private control, hence might have been predisposed to look unfavorably upon the city's management.

DIAMONDS.

The fact that Amsterdam is the great diamond market of the world (though its preeminence is disputed by New York) has led me to discuss the De Beers Consolidated Mines and the London syndicate, which have in their turn brought up the dynamite monopoly as an allied industry. I submit the following data with respect to both corporations:

In 1869–70 diamonds, which had first been discovered near the Orange River, were found at Kimberley, and at once adventurous people rushed there from the four quarters of the globe. The mining claims at that period were in the hands of numerous persons and companies. Mr. Bryce, in "Impressions of South Africa," gives the following account of the consolidation of all mining interests under one head:

> The competition of these independent mine workers was bringing down the price of the stones, and the waste or leakage arising from the theft of stones by the native work people, who sold them to European (illicit) diamond buyers, seriously reduced the profits of mining. It was soon seen that the consolidation of the various concerns would effect enormous savings and form the only means of keeping up the price of diamonds. The process of amalgamating claims and interests and merging them in one huge corporation was completed in 1885, chiefly by the skill and boldness of Mr. Cecil J. Rhodes, who had gone to Natal for his health shortly before 1870, and came up to Kimberley in the first months of the rush. Since the amalgamation the great corporation called the De Beers Consolidated Mining Company (which now owns nearly all the mines) has reduced the output of diamonds to just such an annual amount as experience has proved that Europe and America—the United States is the chief market—are able to take at a price high enough to leave a large profit. By this means the price has been well maintained. This policy, however, has incidentally reduced the population of Kimberley. One powerful corporation with its comparatively small staff of employees has taken the place of the crowd of independent adventurers of the old days, and some of the mines have been closed because the rest are sufficient to produce as many diamonds as it is deemed prudent to put upon the market.

The De Beers Consolidated Mines, Limited, was registered under act 23 of 1861 and incorporated under act 13 of 1888 of the colony of the Cape of Good Hope, with a capital of £3,950,000, or $19,220,700, head office at Kimberley, Griqualand West, South Africa. The life governors are Alfred Beit, Cecil John Rhodes, and Julius Wernher, Mr. Rhodes being chairman.

The bankers of the company are the Standard Bank of South Africa. Limited, Kimberley and London, and the London and Westminster Bank, Lothbury, London. The London transfer office is 62 Lombard street.

The following is extracted from the eleventh annual report of the directors to the shareholders of the De Beers Consolidated Mines (Limited), for the twelve months ending June 30, 1899:

	English money.			United States equivalent.
	£	s.	d.	
The balance carried forward on the 30th of June, after providing for the payment of two dividends of 20 per cent each	1,126,729	11	2	$5,483,229.39
Diamonds produced during year realized	4,038,421	3	8	19,652,976.70
Total expenditure	2,063,713	18	6	10,043,063.82
Leaving a profit of	1,974,707	5	2	9,609,912.88
The profit and loss account stands:				
Balance as above	1,974,707	5	2	9,609,912.88
Dividend on investments and rents	26,322	13	9	128,099.36
Interest on consols	31,315	3	4	152,395.25
Revenue from various sources	28,684	10	4	139,593.20
Balance from last year .... £748,488 6s. 7d. = $3,642,518.45				
Less governor's remuneration paid. 103,206 8 0 = 502,253.95	645,281	18	7	3,140,264.50
Total	2,706,311	11	2	13,170,265.19
Dividends paid and provided for	1,579,582	0	0	7,687,035.80
Balance carried forward to next year	1,126,729	11	2	5,483,229.39

The reserve fund, invested in English consols, amounted June 30, 1898, to £1,179,556 16s. 7d., or $5,739,723.52.

The quantity of blue ground and lumps on the floor on June 30, 1899, including the stock of 1,097,032 loads at Premier mine, was 4,034,816 loads, which were taken into account at 1s. 6d. (36 cents) per load for De Beers and Kimberley mines and 1s. (24.3 cents) per load for Premier mine.

In May, 1898, negotiations were concluded for the purchase of the assets of the London and South African Exploration Company and the rights of the Kimberley Diamond Mining Company. The purchase price of the former was £1,625,000, ($7,907,250) and of the latter £100,000 ($486,650). To meet this outlay, debentures to the amount of £1,750,000 ($8,515,000) were issued. The Dutoitspan and Bulfontein mines were included in the property of the London and South African Company.

At the annual meeting of the De Beers Consolidated Mines (Limited), held at the company's office in London on February 23, 1900, Chairman Rhodes stated that the profits for the year ended June 30, 1899, were, roughly, £2,000,000 ($9,732,000) and that the value of the production at the time that Kimberley was besieged was at the rate of £4,300,000 ($20,923,800) per annum. He said, in part:

> Shareholders may be divided into two classes—those who are imaginative and those who are certainly unimaginative. To the latter class our connection with the chartered company has been for many years past a great trial. Of these purely unimaginative gentlemen, whose sole concern is the accumulation of wealth, I have a large number as my shareholders, and I now state for their consolation that the transactions with the charter are closed and closed satisfactorily. The De Beers Company possesses no shares; it does not even hold a railway debenture in the charter. Every sixpence that you have advanced has been repaid in full, and in addition you have received a great profit. The whole of the diamonds in the interior of Africa wherever the charter exists now belongs to the De Beers Company, who have practically acquired those rights without any payment. * * *
>
> We have erected lately in the colony a few places for cold storage. We found that a very enterprising firm had taken advantage of the loss of our cattle to establish a monopoly in meat against the interests of the general body of consumers. We thought it was wise, both for ourselves and for the people of the country, that we

should deal with this matter and endeavor to check too gross a monopoly in the purchase and distribution of meat. The amazing thing about this meat company is that it receives the sanction and approval of the Africander Bond, and, curiously enough, in spite of their gross attack on our monopoly, which is a monopoly of luxury, they seem to be warm and cordial supporters of a monopoly in meat. The distinction between the luxury of diamonds and the necessity for meat I leave for you to consider. Finding ourselves troubled by European firms connected with the manufacture of dynamite, we have now started a dynamite factory in South Africa, because we felt that with a new State in the north daily developing its gold mines, and with our own personal interests and our stake in Johannesburg, it was time that some powerful corporation should deal with the monopoly which existed in Europe. We have never known from year to year what price we should have to pay for our dynamite, but now we have created our own factory; and if the price demanded in Europe is in our opinion too high, we shall set to work and manufacture the explosive for ourselves. The cost is a mere bagatelle, and I feel sure that we have been right in undertaking the creation of the factory which will tend to check too gross a monopoly. * * *

DYNAMITE.

The Nobel Dynamite Trust Company dates from 1886, when the five largest dynamite companies united, with a capital of $9,600,000, the object being to control the market for explosives. These five companies were not liquidated, but the company bought all the shares at a stipulated rate and is now the sole shareholder of the Nobel's Explosives Company, Limited, of Glasgow, the Hamburger Dynamit Gesellschaft, the Rheinische Dynamitfabrik, at Opladen, the Deutsche Sprengstoff-Aktiengesellschaft, of Hamburg, and the Dresdener Dynamitfabrik, of Dresden. After the invention of smokeless powder in 1889, a closer union between the dynamite and powder factories was brought about, the agreement running from July 1, 1890, to December 31, 1895. It is not liable to change or amendment and can only be ended by liquidation. All gross profits are lumped in one sum, 60 per cent of the profits going to the dynamite factories and the remaining 40 per cent to the powder factories, viz, the factories of the Rhenish and Westphalian provinces, the Rottweil-Hamburg, Kramer and Buccholz and Wolff & Co. Violations of the agreement are fined up to 1,500,000 marks ($395,000).

At the meeting of the shareholders of the Nobel Dynamite Trust Company, Limited, on June 2, 1899, the chairman made the following retrospective reference to the affairs of the company:

Perhaps I ought at the outset to allude to the state of things which existed before the trust company was formed. For some years prior to the formation of the trust company, a strong competition existed in the sale of explosives between the German companies and the Glasgow company. This was seen to be so ruinous that after a time the directors of the German companies and those of the Glasgow company, through the intervention of the late Mr. Nobel, met on numerous occasions to discuss the position and if possible to come to some agreement whereby this competition could be brought to an end. These meetings resulted in an amicable agreement, but after a time it became necessary that a still closer bond of union should be made. Hence the formation of the trust company upon lines which, although perfectly familiar now, were then of a novel character. Those of you who were shareholders of the subsidiary companies will recollect that, at the formation of the trust companies, it was a fundamental part of the arrangement that each of the companies was to retain its autonomy, and the business to be carried on by it was in every respect to be just as if no trust company was in existence, thereby necessarily implying that the directors would be entitled to draw fees for the management as they had been in the habit of doing before the amalgamation took place.

As to the amounts paid to the Glasgow directors for their services, I think when I tell you that the average of the past thirteen years is £6,057 ($29,536.62) a year divided among the directors you will agree with me that the sum is not excessive when you consider that the profits have averaged £122,902 ($598,041.13) per annum as against an average of £37,362 ($181,803.49) per annum made by the company over the previous period of fourteen years. The fees which the directors of the four German subsidiary companies receive are fixed in accordance with the articles of association of these companies, as they existed at the formation of the trust. The average profits of these four companies for the past thirteen years have amounted to £108,000 ($525,528) per annum, and the fees paid to the four boards have together amounted to £7,400 ($36,008.40) per annum."

At that meeting a dividend of 12 per cent was declared, the dividend having risen from 5 per cent, or £65,000 ($316,290), the first year to £273,000 ($1,328,418).

FRANK D. HILL, *Consul.*

AMSTERDAM, *June 21, 1900.*

SPAIN.

BARCELONA.

The trusts or monopolies existing in Spain are those controlling tobacco and the monopoly for the manufacture and sale of matches. The former, under the name of La Compañia Arrendataria de Tabacos, was established June 25, 1887, for a term of twelve years, and with a capital of 60,000,000 pesetas ($11,580,000), divided into 120,000 shares of 500 pesetas ($96.50) each. Of these shares, the Bank of Spain took 60,000. The terms of the monopoly were that the company should pay to the State a certain portion of its profits, the percentage increasing every three years until the expiration of the concession. A prolongation of this concession for twenty-five years was obtained from the Government, together with the monopoly for the manufacture and sale of stamps and stamped paper. The shares of the company are now quoted at 419. The head office is in Madrid, with agencies in all the principal towns in the Kingdom.

The Compañia Arrendataria de Cerrillas y Fosforos (Barcelona) was formed December 27, 1893, for the purpose of monopolizing the sale of matches in Spain. The capital of the syndicate is 5,000,000 pesetas ($965,000), all paid up, the shares issued at 500 pesetas being now valued at 1,210 pesetas. The interest paid last year to the shareholders was 22 per cent on their capital. The concession was granted by the Spanish Government in return for an annual payment to the State of 5,000,000 pesetas. The formation of these two monopolies did not cause any appreciable alteration in the prices, for though the selling prices of tobacco have been considerably raised since the loss of the Spanish colonies, this can not be attributed to the granting of the monopoly.

A concession has also been given by the State to a private firm, Messrs. Catasus, Sans y Cia, of Barcelona, for the working of the salt mines at Torrevieja in the province of Alicante, but as other salt mines exist in Spain, this concession can not be looked upon in the light of a monopoly.

H. HENDERSON RIDER,
Vice and Deputy Consul-General.

BARCELONA, *May 10, 1900.*

CARTHAGENA.

My report must be entirely negative. I do not know of any trust in this country. There are certain monopolies farmed out by the Government, such as tobacco, stamps (except postage stamps), explosives, and matches. In the case of tobacco, explosives, and matches, the contractors have steadily raised the prices, while the quality has deteriorated.

JAS. BOWRON, *Consul.*

CARTHAGENA, *May 3, 1900.*

MADRID.

Trusts, as known in the United States, do not exist in Spain. The only commercial operations in this country approximating the nature of trusts are monopolies granted by the Government and by municipalities under concessions and privileges. For instance:

Tobacco.—The tobacco monopoly, for which the society pays to the Government an indefinite sum per annum, increasing yearly, based upon a calculation (too intricate to be detailed) of the duties and taxes formerly collected in an official way; the society now imports all tobacco, raw and manufactured, operates all the tobacco factories in the country, and sells the products through its own agencies.

Matches.—Matches are also under a similar arrangement, so that all manufacturers are compelled by force of circumstances to sell their products through the monopoly, which in turn disposes of its supplies to the public, chiefly through the shops of the tobacco monopoly.

Electric lights.—In this city there were two large companies (one English and the other German) purveying electricity under special privileges granted by the municipal government. Recently they have been amalgamated with special approval of the municipality, and this industry has really become a monopoly.

In Chamberi, another department of the city, there is an electrical company which, while under an independent organization, works in harmony in the above-mentioned organization.

There is a small company supplying electricity for special purposes, but this is of minor importance.

Street railways.—These have become a virtual monopoly, the only line not in the combination being a mule car line extending from the southerly districts of the city to the suburbs, called Carabauchel and Leganés. This does not run in competition with the other lines.

For general information, I may add that the fares upon the street-car lines are not uniform, but vary according to distance, from 5 centimos (about 1 cent) to 25 centimos (about 5 cents), the tickets or checks given by the conductors upon payment of fares being of various colors, indicative of the amount paid, in a manner very similar to the methods which obtained in the early days of street-car operations in the United States.

DWIGHT T. REED, *Vice-Consul.*

MADRID, *June 23, 1900.*

SUPPLEMENTARY.

In my report dated June 23, 1900, I omitted to mention the matter of the explosives monopoly. This controls the sixteen factories, or works, for manufacturing powder and explosives for sale and use in Spain. The districts in which the works are located and the names thereof are as follows·

Asturias: Santa Bárbara, not working; Cayés, not working; and La Manjoya, not working. Barcelona: Gualba, not working; and La Nueva Manresana, not working. Cadiz: Bonanza, not working. Gerona: Figueras, not working; and Ripoll, not working. Granada: Güevejar, not working. Murcía: Mazarrón, not working; and Sociedad Anónima Franco-Española de Explosivos y Productos Químicos (the Franco-Spanish Company, manufacturers of explosives and chemical products); Alumbro, Cartagena, worked for the union. Vizcaya: Arrigorríaga, not working; Galdácano, worked for the union; Nocedal, not working; and Zaramillo, not working. Zaragoza, Villafeliche, worked for the union. Only three out of sixteen are working.

The title of the monopoly company is Unión Española de Explosivos.

This union was authorized in June, 1897, with the exclusive right to make and sell powder and explosives for twenty years in Spain (peninsular) and adjacent islands, and to import same from abroad (except for the uses of the army and navy) unless it could not supply powder for hunting equal to the foreign productions of the brands or marks known as "F," "FF," "FFF," and "TB," "Diamont," and white "Ambite Schulce," or their equivalents. In such case, private persons are allowed to import flasks containing one-fourth or one-half a kilogram (0.5511 to 1.1023 pounds) each, of such powder, or cartridges loaded therewith, but they will not be permitted to pass the customs without paying the duties named in the tariff, and also, in addition thereto, paying to the union a commission thereon, as follows: On each flask of black powder, of the qualities scheduled, 1.35 pesetas ($0.26055) for each one-fourth kilogram; on one-fourth kilogram of white powder, 2.85 pesetas ($0.5505); on each one-half kilogram of black powder, 2.75 pesetas ($0.53075); on each one-half kilogram of white powder, 5.75 pesetas ($1.00975); on every 100 cartridges loaded with black powder, 3.50 pesetas ($0.6755), and on the same if loaded with white powder, 6.50 pesetas ($1.2535). The customs duty on powder and explosives is sixty one-hundredths of a peseta ($0.1158) per kilogram if it comes from a country having no commercial treaty with Spain; otherwise the duty is one-sixth less, or fifty one-hundredths of a peseta per kilogram (2.2045 pounds).

The union appears also to control the sale of all fuse, ordinary and waterproof, capsules for firing dynamite and other explosives, as well as cartridges, both charged and blank, for mining work, hunting arms, and revolvers; it also undertakes to import any specialties in this line for those who may require them. It will be seen that with the customs duties plus the commission to be paid to the union, the costs are very high.

The productive capacity of the works named is not given, and no detail is obtainable as to the inside operation of this union or monopoly.

The products are sold through its own agencies, the Kingdom being divided into nine districts, six of which, in the most important mining regions, have several subagents.

The three works in operation appear to be able to supply all the explosives required; but, of course, at a "remunerative price."

The explosives monopoly may be said to be practically complete and fully authorized by enactment of law.

DWIGHT T. REED,
Vice-Consul.

MADRID, *June 28, 1900.*

MALAGA.

Consul Bartleman reports, under date of April 30, 1900, that no trade combinations exist in the Malaga consular district.

VALENCIA.

There are no combinations of capital in this district similar to the so-called trusts of the United States. The relations of capital, labor, production, and distribution still preserve the simpler forms of development here. Only within the last few years have the first strong companies or syndicates for manufacturing and commercial purposes been formed, and no movement has yet been made to combine them. There are, however, a couple of huge monopolies in Spain—the manufacture of matches and tobacco, rented by Government to combinations of capitalists on conditions which specify precisely the quality and price of the goods to be supplied to the public. The result of these monopolies has been to enhance the price of the articles they control.

HORACE LEE WASHINGTON,
Consul.

VALENCIA, *May 10, 1900.*

SWEDEN.

I have made inquiries on the subject, but the general opinion here seems to be that there are no trusts in Sweden. Still, by carefully reading the daily newspapers one may learn a little about agreements made between manufacturers and others. The inference drawn is that the manufacturers of iron and steel, wood pulp, and anchovies make yearly agreements as to prices for their respective manufactures. Sugar manufacturers also agree as to the price of sugar and as to the price they are to pay for beets. It is possible that such agreements, unknown to me, exist in other enterprises, such as sawmills, paper mills, match factories, etc. I have been unable to find any printed statistics or detailed reports in this matter.

Coal dealers, retail grocers, and cigar dealers also have certain agreements to prevent "unsound competition" in the trade, and all of these combinations seem to be made for the purpose of increasing prices or for keeping them above a certain minimum.

Nearly all manufacturing establishments are owned by companies, and smaller concerns may sometimes enter such companies. This is the case with Aktiebolaget Sveriges Förenade Konservfabriker, Gothenburg (capital stock, $268,000), which includes several anchovy factories, and Aktiebolaget Göteborgs Förenade Bryggerier, Gothenburg (capital stock, $670,000), which owns two or three breweries here; but such combinations do not appear to be numerous, and are, so far as prices are concerned, probably made unnecessary by reason of above-mentioned agreements. When small concerns are in this way joined together, the only result is increased production or improved manufacturing methods, especially as no one of the corporations is strong enough to obtain a monopoly of any article.

The situation may, therefore, be summed up as follows: If trusts exist in Sweden, they do not seem to be very powerful and have not attracted special attention.

Regarding labor, the following may be mentioned: Partly owing to the tendency of the times and partly by reason of high prices of the necessaries of life, the labor unions constantly increase in number, membership, and influence, and strikes are not uncommon. It is said, therefore, that certain employers, such as building contractors, sawmill owners, etc., are joining to resist the demands of the workmen; but this applies only to lockouts, strikes, and the like, and each establishment has a separate owner.

ROBERT S. S. BERGH, *Consul.*

GOTHENBURG, *May 30, 1900.*

NORWAY.

Trusts in the generally accepted sense of the word do not exist in Norway. The only trade combinations to be found here are organizations among certain manufacturers and dealers for the purpose of regulating the prices of their goods. The most important have been formed by the producers of wood pulp, of lumber, and of paper. Their aim is to agree on uniform prices and to work in harmony for the purpose of increasing the demand for their goods in the markets of the world, but no effort is made to control the output. Every individual firm secures all the sales within its reach, and there is open competition among the several firms as regards quality, but not price, so far as consistent.

American petroleum is handled by two companies with like organization. One of them, The Vestlandske Petroleum Company, with headquarters at Bergen, has a capital-stock valuation of 270,000 kroner ($72,360), and the other, The Østlandske Petroleum Company, with headquarters at Christiania, has a capital-stock valuation of 705,000 kroner ($188,940). These companies have considerable competition from outsiders, their strongest rival being a company importing crude Russian petroleum which is refined at its own works.

Another organization, of apparently higher scope, is the Anglo-Swiss Condensed Milk Company, which is proprietor of the plants at Hamar and Sandesund. It is a stock company, composed of foreigners and Norwegians, with works in different countries. The company has a capital of 20,000,000 francs ($3,860,000), divided into 40,000 shares. The plant at Hamar is valued at 697,329 kroner ($186,884), and that at Sandesund at 872,139 kroner ($233,733). The company is now contemplating a consolidation with another like establishment, the Nestle Company, which owns a large milk-condensing plant in Toten, Norway.

Some other manufacturers and the shipowners have similar organizations, but none of them can be termed trusts.

These enterprises have very little, if any, effect on wages paid for labor. The organizations for protection of labor are in a far higher state of perfection in Norway than those of capital.

HENRY BORDEWICH, *Consul.*

CHRISTIANIA, *May 8, 1900.*

SWITZERLAND.

Up to the present, all efforts to form trusts in Switzerland have failed, and these failures are attributed to the fact that the Swiss industries are not well adapted to the successful formation of trusts. For instance, in the spinning industry the formation of a trust is made difficult because of the absence of uniformity in production, some establishments being possessed of antiquated machinery and others being equipped with modern machines. Some of these are operated on moderate capital, others have unlimited resources. At times those producing fine goods are favored with a flourishing trade, while the factories where coarse goods are made find little demand for their products. These conflicting features have in a large measure been the cause of the defeat of several attempts to form a trust in the spinning industry.

In the weaving industry, no movement toward forming a trust has ever been seriously attempted, because such an effort would not stand any chance of success, the difficulties mentioned in the spinning trade being even greater in this branch. The same may be said of the embroidery industry and of the watch and jewelry trade, both of which are partly house occupations. In cheese making, there is a wide difference in the management of the herds that are found in the Alps and those owned by the rich landed proprietors in some of the Swiss valleys. The throwing plants of eastern Switzerland, which are principally operated for the embroidery industry and to a small extent for the bolting-cloth makers and the weavers, have formed a trust in so far that they have agreed upon a minimum price for their product, but no agreement has been obtained concerning the maximum price. This is a combination formed simply to keep the prices from going below a certain point, while the door is left wide open as to the maximum price each firm may obtain. For instance, No. 70 (three thread) costs to-day 91 cents per kilo (2.2046 pounds), while there are yarns of the same number worth 15 per cent less and some worth 15 per cent more. Thus, in spite of the agreement, there may be a price margin of 30 per cent for the same number of yarn. In this combination, the small concerns operating old machines often have to compete at a great disadvantage with large establishments possessing modern machinery and ample capital, and therefore, as a matter of course, the combination agreed upon can not long endure, and there are already indications of dissolution.

The well-developed Swiss machine industry, the electrical industry, and the silk industry seem to have no decided tendency to form combinations. All of these industries are in the hands of able men with large resources, and having been extremely successful in their operations—profits having been good and business stable—there is evidently no reason why combinations should be formed.

CHEMICALS.

The chemical industry, which is well developed in northern Switzerland, is so successful in general that the various firms have no apparent inclination to combine. Much of the prosperity noticed in the chemical industry can be traced to the fact that Switzerland is not under any treaty obligations or otherwise bound to protect the German patents, which are so necessary and valuable to this great industry, and, consequently, a wide field for imitation is open, especially along the northern Swiss frontier. This has enabled some of the Swiss concerns to undersell the Germans, which has resulted in large dividends. Basel alone exported in the year 1899, $3,280,000 worth of aniline colors. The heaviest buyer was England, most of the colors going to the great dyeing establishments in Yorkshire.

MILK.

The milk producers have a so-called trust or combine to prevent unfair competition. Recently, the various communities of eastern Switzerland agreed to sell milk to the cheese manufacturers at a certain fixed price for six months. The summer price is 2⅖ cents per liter (1.05 quarts); the winter price, 2¾ cents per liter. The milk consumed in hotels, restaurants, and residences is not controlled by this agreement.

During last year, the press of Switzerland had much to say about the question of a condensed-milk trust. The Chamer Milk Association and the Nestle Milk Association are the leading concerns in the condensed-milk industry in Switzerland, and possibly the world. It seems that no combination was planned by the two firms, but that certain financial institutions conceived the idea of combining the establishments, whose total interests represent a value of nearly $8,000,000. But even with these two compact and thoroughly organized concerns a combination could not be materialized, and the banks directly interested in the project suffered heavy losses, causing a panic on exchange, which brought about several business failures.

CHOCOLATE.

The chocolate industry, which is a very important one, has passed through some trying times. This condition was brought about largely by the small concerns who have light operating expenses, and who were able, in the cheaper grade of chocolate, to work up a keen competition with the large ones, that are paying enormous sums annually for advertising expenses in order to call the attention of the world to their products. This condition finally became unbearable for the great establishments, and they opened a vigorous campaign against the small manufacturers by selling their cheap grade of chocolate at or below cost of production. The small manufacturers make only cheap grades of chocolate, but the great firms make not only these, but fine and fancy chocolate of all kinds. While they depressed the prices on all the cheap grades, they maintained high prices for their fancy products. Thus, while the small factories were losing on their total product, the large factories were losing on only part of their output. This condition became very threatening to the existence of the weaker concerns, and on March 13, 1900, it was agreed by both sides to raise the prices on the cheap grades 15 per cent, which has brought much desired relief to a very uncomfortable trade situation. This agreement was made by thirty-seven firms, but it is simply an oral one, and its purpose was not to increase profits, but to save the industry from a threatened collapse. It is very doubtful how long this agreement can be maintained, for the larger firms have many advantages over their small competitors in the way of wider fields of operation, and the result will probably be a reduction again, not only in price, but possibly in quality.

LIMEKILNS.

The limekiln proprietors formed a combination against unfair competition. A control bureau was established in Zurich, through which all purchase orders had to pass, and this control possessed the power to dictate from what establishments these orders were to be filled. This restrictive and compulsory system became very annoying to the large manufacturers, and to-day many are ignoring the regulations of the trust and are selling below the arbitrary prices to whom and when they can. At the time the agreement was made, a cement combination was also established for self-protection, and through wise and liberal regulations is flourishing to the mutual satisfaction of both producer and consumer. The reason for its genuine success lies in the fact that the rights of all interested in the industry—consumers, producers, and laborers—were carefully considered in preparing the laws which govern its administration.

BLEACHING AND FINISHING.

One of the most important industries in eastern Switzerland is that of bleaching and finishing, which is directly dependent upon the great embroidery industry. The bleachers and finishers have during several years passed through many vicissitudes. The embroidery manufacturers would force down their prices in seasons of business stagnation, but seldom showed any disposition to increase their pay during the time of trade prosperity. The bleachers and finishers finally tired of this treatment, and in the autumn of 1898 formed a combination. They very carefully and wisely established a schedule of reasonable prices, and while the embroidery people struggled against this new arrangement for a while, owing to the prosperous condition of the trade caused largely by the demand for embroideries on the American market, they finally yielded, and now the trust is flourishing and is able to pay operatives better and more stable wages than for years, and has also been able to establish a reserve fund to help the weaker establishments in times of great depression.

EMBROIDERY.

One of the principal Swiss enterprises, whose annual production amounts in value to over $20,000,000, is the famous embroidery industry. In the year 1883, a great financial depression existed in the European and American markets. The effect on the embroidery trade was very serious, and the overproduction, caused by the lack of demand, threatened disastrous results. The products of the embroidering machines marketed at such reduced prices that profits became an impossibility, except when business immorality was introduced into the trade. Commercial anarchy crowded out the former legitimate and honorable system, and the ruin of the industry, so valuable and important to eastern Switzerland, was for a time a probability. In this evil hour the best men concerned took matters into earnest consideration, and after a strong appeal to the conscience of the capital and labor involved the so-called Embroidery Union was founded, comprising all of the manufacturers, exporters, merchants, and operatives interested. In 1885, a minimum workingman's wage and a maximum working time were agreed upon, in order to adjust the cost of production and the market prices and to control the amount of production. The control of the union was placed under the jurisdiction of a special tribune, whose administration of the affairs of the organization and enforcement of its rules and regulations were of the severest nature. At the end of the year 1885, 21,200 embroidery machines were being operated in eastern Switzerland and the Vorarlberg, employing about 70,000 people. These, together with the people engaged in the assistant industries, made the population actually supported by this industry number about 150,000.

Much good was accomplished by this combination in relieving a serious condition of the market, in protecting the workmen against the oppression and tyranny of the employers, in guarding the employees against unjust demands of labor, and in fighting unclean and disastrous competition on the part of those whose standard of commercial honor was below par. Seldom in the history of industrial combinations for the mutual welfare of all interests concerned has there been a better example of wholesome results than can be shown for a short time in this embroidery union. But after a while the tendency to reform too much became manifest, and upon this rock the union was wrecked. Too many rules were promulgated, too many and too restrictive measures were enforced. Too much compulsion and too little observation of natural laws and natural conditions prevailed, and finally the combination, which might have continued to work beneficent results, was suffocated by "overdoing" and expired at a time when the industry was in a prosperous condition. In the United States, trusts seem to flourish only in seasons when prosperity reigns. In Switzerland trusts, such as they are, come into life in periods of great business depression.

JAMES T. DU BOIS,
Consul-General.

ST. GALL, *May 21, 1900.*

AARAU.

So far as I have been able to learn, no trusts exist in Switzerland. There are no laws upon the subject. Even if such combinations were made, I very much doubt if it would be possible for them to effect a decrease in the almost starvation wages which are generally paid by manufacturers of Switzerland to their employees. In this district, for instance, which is considered one of the most prosperous in the country, a skilled mechanic, either in the manufacture of straw goods, silks, or knit goods, is considered well paid if he receives 60 cents per day.

Henry H. Morgan, *Consul.*

Aarau, *May 4, 1900.*

BASEL.

In this consular district, nothing exists which can properly be designated as a trust. There are indeed occasional consolidations and combinations of manufacturing or commercial houses and corporations; but up to this time this process of fusion has not in any case gone far enough to exclude the most active competition, or to enable any one combination to limit production or determine prices. The important and flourishing industries of this part of Switzerland are those engaged in the manufacture of silk ribbons, dyestuffs, chemicals, and spun silk. A large ribbon manufactory of Basel has recently united with two others in Saeckingen, Germany, and the three houses are now working as a corporation or joint stock company, but they are very far from constituting a trust in the American sense, since they have many competitors, some of them of equal financial strength. The chemical and spun-silk industries are in the same situation. There is not only no cooperation between the different houses, but there is oftener than otherwise an active and sometimes a ruinous antagonism. In times of difficulty, efforts are occasionally made to prevent the intolerable depression of prices by an informal agreement between the rival manufacturers; but even these verbal agreements, which go no further than a promise not to sell at a price below a certain minimum, have had only an imperfect and transitory success.

It is difficult to see how trusts could be formed within the limits of this country. If all the Swiss manufacturers in a given branch were to combine, they would still be exposed to the direct and immediate competition of the contiguous German and French territory.

George Gifford, *Consul.*

Basel, *May 3, 1900.*

BERNE.

Consul Frankenthal, under date of May 23, 1900, reports that no trusts exist in his district.

GENEVA.

There are very few manufacturing industries of any importance in French Switzerland, and trusts, as we understand them in the United States, do not exist here. There is none the less, in retail trade circles, a feeling that trade organizations for maintaining uniform prices are useful and more or less necessary, and this feeling has taken shape in the way of several associations which have been formed in Geneva and Lausanne, the two principal cities of this district. Recently, for example, the butchers of Geneva formed a union for the purpose of keeping up prices and making them uniform. Wood and coal merchants formed a similar association. In no instance, however, did all the tradesmen in these commodities join the association; on the other hand, many stayed out and fought the combine.

The only organization really approaching a trust in French Switzerland exists at Lausanne. This is a company that was organized about a year ago, with a capital of $150,000. Its purpose was to acquire possession of and operate on a trust basis the various important bakeries of Lausanne. The company is now in active operation, and is said to be prosperous in spite of the fact that many bakeries were not taken in and are fighting it. Its ultimate purpose is to acquire the leading flour mills and grind all the flour that may be required by the trust bakeries. The enterprise seems ridiculously small as compared with our trade combinations, yet baking is quite an important industry in this country of great hotels and boarding houses, and the Lausanne enterprise is being watched with interest.

At Geneva, three years ago, four of the leading hotels were purchased by a company, and are being operated as a joint stock corporation, but up to this time the venture has not been very profitable, although the stock of the company has recently advanced in value, because of the good season last year and the prospect for a still better one this year.

Last year, an effort was made by a syndicate to organize the watch hair-springs manufacturing interests of French Switzerland on a trust basis, and a company was formed with that idea in view. The several factories entered the combine, and at once advanced prices. The result was that their customers established an opposition factory, and in the end compelled the combination to restore prices to the former basis.

These are about the only suggestions of trusts with which French Switzerland has had any experience, yet I repeat that there is a feeling that trade combines are useful, and it is intimated that an effort may be made to increase Swiss customs tariffs in certain directions, with the idea of forming one or two important trusts.

B. H. RIDGELY, *Consul.*

GENEVA, *May 4, 1900.*

UNITED KINGDOM.

BRADFORD.

The combine mania has smitten this district with almost the fury of an epidemic, and more than any other part of the country it is responsible for the flotation of trusts. To what extent these have been effected will be clearly seen from the following table:

Date of flotation.	Name of company.	Number of businesses absorbed.	Capitalization.	
			English money.	United States equivalent.
1898.				
Dec. 14	Bradford Dyers' Association, Limited	22	£4,500,000	$21,899,250
1899.				
July 4	Yorkshire Indigo, Scarlet, and Color Dyers, Limited.	11	600,000	2,919,900
July 6	Bradford Coal Merchants and Consumers' Association, Limited	9	250,000	1,216,625
Oct. 9	Yorkshire Wool Combers' Association, Limited	38	2,500,000	12,166,250
1900.				
April 4	British Cotton and Wool Dyers' Association, Limited.	46	2,750,000	13,382,875
	Total	126	10,600,000	51,584,900

I note below the special features connected with each combine.

BRADFORD DYERS' ASSOCIATION, LIMITED.

The special object in the formation of this trust was the amalgamation of the various businesses engaged in what is known as the "Bradford piece dyeing trade." The authorized capital is £3,000,000 ($14,599,506), it being made up of £1,500,000 ($7,299,750) 5 per cent preference shares of £1 ($4.86) each and £1,500,000 ($7,299,750) ordinary shares of £1 ($4.86) each. The preference shares are cumulative and preferential both as to capital and dividend, and there is also £1,500,000 ($7,299,750) 4 per cent first mortgage perpetual debenture stock, which really brings the capital of the company, as set forth in the above list, to £4,500,000 ($21,899,250). The debenture stock is secured by a trust deed, constituting a specific first mortgage upon the property now purchased, and a floating first charge upon all the other assets of the company. The interest of the debenture stock is paid half yearly, on the 1st of January and 1st of July, respectively. In the event of a voluntary winding up at any time for reconstruction, amalgamation, or other purpose, the debenture stock is redeemable at the price of £110 ($535.31) per £100 ($486.65) stock.

The following entered into contracts with this association for the sale of their businesses:

Established.	Name and address of vendors.	Established.	Name and address of vendors.
1842	George Armitage, Limited, Bradford.	1869	Shaw & Co., Shipley.
1835	William Aykroid & Sons, Bradford.	1891	John Shaw & Co., Limited, Bradford.
1892	Bradford and District Dyeing Company, Limited, Halifax.	1893	Sam Shepherd & Co., Yeadon.
1875	George Briggs & Sons, Cleckheaton.	1828	Samuel Smith & Co., Limited, Bradford.
1896	Craven Pearson & Co., Limited, Brighouse.	1887	John H. Stott & Co., Bradford.
1862	Fountain Finishing Co., Limited, Bradford.	1892	Thornton, Hannam & Marshall, Brighouse.
1863	W. Grandage & Co., Limited, Bradford.	1880	Ward & Sons, Limited, Halifax.
1893	Harry H. Hall & Co., Guiseley.	1877	Whittaker Bros. & Co., dyers, Limited, Newlay.
1892	Hunsworth Dyeing Co., Limited, Cleckheaton.		Frederic Cawley & Co., Manchester.
1846	Samuel Kirk & Sons, Leeds.		E. Kershaw & Son, Limited, Salford.
1889	John Mitchell & Co., Keighley.		The Standish Co., Limited, Wigan.
1827	James Reffitt & Sons, Leeds.		R. W. Walker, Rochdale.
1809	Edward Ripley & Sons, Bradford.		Ingham Brothers, Halifax.
1862	James and M. S. Sharp & Co., Limited, Heckmondwike.		William Bancroft & Sons, Halifax

It will be seen from the above list that since the formation of the trust the company has acquired six other businesses, four of which are very closely identified with the treatment and dyeing of the famous mercerized cotton fabrics.

It is impossible to give the stock valuation of each firm in the trust, and it is very significant that in not one of all the six businesses is there given in the prospectus a detailed statement of the profits earned, even for one year. The accountants employed in examining the books and arriving at the profits have in the main taken the figures for a period of three years, and by this means struck a balance. For the twenty-two businesses first amalgamated, it is stated that the results were £225,656 16s. 6d. ($1,098,158.94), this being the annual average sum.

Turning to the advantages set forth as likely to be gained by this amalgamation of interests, the following may be briefly mentioned:

First. The avoidance of loss through undue competition and cutting of prices below cost.

While it is apparent that the inclusion of about 90 per cent of the entire trade within this association amounts to practically a monopoly, the directors recognize that the interests of the company are largely identical with those of the manufacturers and merchants of the district, and though there are no doubt cases in which readjustment and regulation of rates are desirable to enable all the firms to obtain their proportionate share of profit, it is declared to be no part of the present scheme to inaugurate an era of inflated prices.

Second. The economies and improvements in production arising from the combined practical knowledge of the members forming the board of directors (who are all men of great experience in the dyeing trade) as a consulting and advisory body available for each branch.

Third. The economies due to centralization of office work and of buying, distributing, and financial arrangements.

The directors, it is stated, are fully alive to the desirability of conserving the individuality and initiative of the various businesses, and will not allow centralization to act detrimentally in these matters; but there are many obvious advantages to be gained—as, for example, in combined buying, in the supply of ample capital, and in relieving, where desirable, technical managers from the burden of many subsidiary duties, and allowing them to concentrate their attention on their special departments.

Practically speaking, this important combine has now been working most successfully for the past sixteen months, and early this year the first ordinary general meeting was held to receive the report of the directors for fifteen months. For the time specified the gross profits amounted to no less than £405,396 14s. 8d. ($1,972,863.20), and as the gross profits were estimated when the company was floated to be £225,656 ($1,098,154.92) per annum it will be seen that there is an excess of £179,740 ($874,704.71) over the estimated annual return of profits. The profit as set forth in the prospectus was arrived at after charging about £50,000 ($243,325) per annum for renewal of property and general maintenance. Out of the gross profits there were paid for administration expenses £53,852 ($262,070.75); for depreciation, £62,500 ($304,156.25); for venders' interest, £53,241 ($259,097.32), and interest on debenture stock, £34,146 ($166,171.50); which amounts total £203,920 ($992,376.68), and reduce the profits to a net balance of £201.475 17s. 11d. ($980,482.44). After all other reductions, there was a net profit available for distribution of £160,271 10s. 7d. ($779,961.40). This sum was divided and distributed by the preference shareholders receiving 5 per cent interest, the ordinary shareholders receiving 10 per cent, while there was placed to a reserve fund £60,000 ($291,990), after which there remained a balance, which was carried forward, of £26,033 7s. 7d. ($126,691.45). It will be seen that a much larger dividend could have been paid, but the directors thought it advisable to make provision for a rainy day, and accordingly carried forward £60,000 ($291,990). There can be no doubt that these excellent results have accrued from the good times which the Bradford trade has recently been enjoying. The association describes the general results as follows:

(*a*) There have been some advances in prices of certain classes of work, but these advances have not been anything like in proportion to the increased cost of coal and other materials.

(*b*) We consider that our customers have benefited considerably by the large contracts in advance, which, as a combination, we have been enabled to make, as in all probability one or more general advances in prices would otherwise have been necessary before this.

(*c*) The total production of the associated firms has been increased and the works are now better equipped than they have been at any previous time.

(*d*) We believe the employees have not in any way suffered and that the wages earned are higher all round.

YORKSHIRE INDIGO, SCARLET, AND COLOR DYERS, LIMITED.

The formation of this company was no doubt prompted by the successful issue of the Bradford Dyers' Association. It was formed for the purpose of acquiring and carrying on the businesses of nearly all the firms engaged in dyeing cloth into indigo, scarlet, and the various shades of men's fabrics. The firms comprising the combine are:

Established.	Names and addresses of venders.	Established.	Names and addresses of venders.
1700....	William Kitchen & Co., Leeds.	1868...	Edward Turner, Halifax.
1798....	Croysdale Bros., Leeds.	1870...	Smith & Horsfall, Heckmondwike.
1831....	William Walker & Co., Leeds.	1876...	J. Longbottom & Co., Luddenden Foot.
1840....	Samuel Bennett & Son, Horbury.	1880...	J. & J. Longbottom, Birstal.
1861....	Kirkburton Dyeing Co., Kirkburton.	1881...	Francis David, Elland.
1864....	Pickles, Smithson & Pickles, Limited, Dewsbury.		

The above firms practically represent all the Yorkshire businesses engaged in dyeing this class of textiles; and all the cloth used for uniforms, liveries, etc., by Her Majesty's colonial and foreign Governments is dyed by the above firms.

In connection with the advantages set forth at the time of the flotation, it is worthy of mention that while the above firms monopolize all the trade in this class of goods, indigo, wool, and piece dyeing is almost exclusively carried on in the West Riding of Yorkshire, and the works are all situated in the very center of the industry. As the dyes used are of an expensive character, it will be seen that by purchasing all their manufacturing commodities together considerable saving will be effected, while, as competition is practically cut off and prices raised slightly, there is every likelihood of this company being a success, though it can not be expected to show such returns as the Bradford Dyers' Association. The first year's working has not yet been accomplished, but from what I hear, a respectable dividend will be forthcoming when the accounts are made up on June 30. The registered office of this company is 23 John William street, Huddersfield.

BRADFORD COAL MERCHANTS AND CONSUMERS' ASSOCIATION.

This combine, although not of the textile class, is so closely identified with it that practically speaking its interests are one. This is shown forcibly in the fact that the Bradford Dyers' Association is a large shareholder in the Bradford Coal Merchants and Consumers' Association. Although not of such a pretentious nature as any of the Yorkshire textile combines, the Coal Merchants' Association is of no mean order in this special department of trade. It was felt by all the leading distributers that there had long been a good deal of unnecessary cutting of rates, and with a combining of interests no less trade would be done, but a "living profit" could be obtained. As set forth in the above table, the capital of this company is £250,000 ($1,216,625), divided into 100,000 cumulative 5 per cent preference shares of £1 ($4.86) each, and 150,000 ordinary shares of £1 each. It is worthy of note that only 80,000 of the preference shares were offered for public subscription at par, the remainder being reserved by the venders. The venders also agreed to take 119,790 ordinary shares at par as part payment of the purchase price of the various businesses, but the remainder of these shares were not offered for public subscription. The following are the businesses amalgamated:

Established	Names and addresses of venders.	Established.	Names and addresses of venders.
1869....	Jabez Cole & Co., Bradford.	1858....	Joseph Carnelley, Bradford.
1863....	William Parkinson, Bradford.	1883....	Henry Thacker, Bradford.
1850....	Edward Parkinson, Bradford.	1858....	Edward Pye, Bradford.
1855....	Joshua Smith, Bradford.	1844....	John Triffitt, Bradford.

The extent and importance of the above may be gauged from the fact that they carry on 90 per cent of the steam coal trade done in Bradford, besides controlling a large trade in household coal. It should be noted that Yorkshire coal-pit owners have rarely in vogue a standard scale of prices for all customers, but that the biggest buyers can purchase a trifle cheaper than the individual taking, say, half or a quarter as much. Hence this association believes that considerable economy can be effected in the placing of contracts, while other charges incidental to this business can be materially lessened.

The report of the directors was issued a few days ago, and, among other things, they state that during the past year business in the city and district has been generally active and satisfactory, and they are pleased to be able to report an increased trading turnover, together with substantial profits thereon, considerably in excess of those certified in the company's prospectus issued last July. It has been found that the entering into an agreement with the Bradford Dyers' Association, Limited, has worked admirably, this company being represented on the coal association directorate by two of its members. The benefit of this amalgamation of interests has not so far been materially felt, as many of the contracts for the supply of coal to the dyers' association do not expire until late this year. The directors are, however, satisfied that when the full benefit of the coal contracts is obtained considerable profit will result. The net profits for the year, after providing for bad and doubtful debts, depreciation, maintenance and repairs to wagons, plant, and real estate, managers' salaries, directors' fees, etc., amount to £18,148 ($88,317.24). From this amount there has been paid the sum of £2,341 ($11,392.47) for dividend on 5½ per cent preference shares for the year, and £3,593 ($17,485.33) for dividend on ordinary shares at 3 per cent for six months, and venders' interest, £646 ($3,143.75); together, £7,482 ($36,411.11), leaving a balance of undivided profits, which the directors propose shall be dealt with as follows: To pay a dividend at 5 per cent for six months, ending March 31, 1900 (making 8 per cent for the year), £5,989 17s. ($29,149.60); to carry a reserve, £3,000 ($14.599.50); to reserve for income tax, £372 5s. ($1,811.55); to carry forward to next account, £1,313 15s. 3d. ($6,393.43)—£10,675 17s. 3d. ($51,954.08).

YORKSHIRE WOOL COMBERS' ASSOCIATION.

This may be said to be the preeminent trade of the city of Bradford, the business of wool combing and wool spinning dating back several centuries, the results of wool manipulation by these methods making the name of Bradford almost a household word throughout the world. The knowledge that the Bradford dyers were flourishing set the "leading lights" in this trade to work to see if something could not be done to bring together the many businesses connected with that of wool combing. After many meetings, some opposition, and a little trouble, the Yorkshire Wool Combers Association was floated most successfully, and business is said to be proceeding peaceably, and as far as the exigencies of the trade will allow, successfully. It is worthy of mention that for some years previous to 1895, there was a working agreement between the varied firms as to what price per pound should be charged for combing wool, which, so long as trade held good, worked satisfactorily, but, with the hard times following the enactment of the McKinley tariff, this arrangement was broken, and since then competition has been so keen that it is alleged, and I believe with considerable truth, that many Bradford combers have been content to keep their factories going with what is generally known as "mill profits." The authorized capital is £2,500,000 ($12,166,250) made up of £1,500,000 ($7,299,750) share capital, and £1,000,000 ($4,866,500) first-mortgage debenture stock. The share capital is divided into 800,000 preferred ordinary shares of £1 ($4.86) each, and 700,000 deferred ordinary shares of £1 ($4.86) each; total, 1,500,000. The present issue was only for £1,931,800 ($9,401,104.70), being made up of £750,000 ($3,649,875) 4 per cent first-mortgage debenture stock, part of the £1,000,000 ($4,866,500) debenture stock mentioned above; 650,000 preferred ordinary shares of £1 each, 531,800 deferred ordinary shares of £1 each. The venders took all the present issue of deferred ordinary shares and one-third of the issue of 4 per cent debenture stock and preferred ordinary shares in part payment of the purchase consideration, leaving £500,000 ($2,433,250) debenture stock and £433,334 ($2,108,819.91) preferred ordinary shares, which were offered for public subscription at par and subscribed for something like a dozen times over. The following is a list of the businesses taken over, but the date of the establishment of each one I can not ascertain:

Names and addresses of venders.

1. Ackrody & Ambler, Bradford.
2. James Alderson & Co., Bradford.
3. The Allerton Combing Company, Bradford.
4. Ayrton & Co., Bradford.
5. Jonathan Barker & Sons, Bradford.
6. Bradford Combing Company, Limited, Bradford.
7. The Brown-Royd Combing Company, Bradford.
8. Campbell & Harrison, Limited, Bradford.
9. S. Aykroyd & Co., Rodley.
10. J. & C. Crabtree, Bradford.
11. John Cure & Co., Bradford.
12. W. C. Dixon & Co., Bradford.
13. J. W. Firth, Bradford.
14. Halifax Wool Combing Company, Limited, Halifax.
15. J. L. Haliday, Bradford.
16. Joseph Heaton, Bradford.
17. T. Hawoth & Co., Bradford.
18. F. Illingworth & Co., Bradford.
19. Walter R. Kay, Bradford.
20. S. & S. Musgrave, Bradford.
21. Thomas Park, Bradford.
22. G. E. Pontefract, Bradford.
23. John Priestman & Co., Limited, Bradford.
24. John Pickles & Son, Bradford.
25. H. R. Ramsbottom & Co., Limited, Bradford.
26. Robinson & Alderson, Bradford.
27. G. Root & Co., Bradford.
28. Thomas Henry Shaw, Bradford.
29. David Smith & Co., Limited, Bradford.
30. Daniel Smith & Co., Limited, Bradford.
31. John Smith & Sons, Limited, Bradford.
32. Shipley Wool Combing Company, Limited, Shipley.
33. Thomas Speight, Bradford.
34. Jonathan Taylor, Bradford.
35. Terry & Co., Bradford.
36. John Todd & Sons, Bradford.
37. Warton & Monies, Bradford.
38. D. & A. Wilson, Shipley.

I am informed on unquestionable authority that other businesses of wool combers are on the point of being taken over, but the names of the firms are as yet not made public. However, it should be pointed out that while the Yorkshire Wool Combers' Association is extensive in its operations, it is not as perfect and consolidated in its working operations as the Bradford Dyers' Association. This arises from the fact that two of the principal businesses in the trade, namely, Messrs. Isaac Holden & Sons, Limited, and Messrs. Holden, Burnley & Co., are not yet in the combine, having at the time of the flotation refused to have anything to do with it. Family reasons were given as the principal ground for the refusal of the firms in question. If they should enter, together with another firm of very considerable dimensions, namely, Messrs. W. H. Greenwood & Co., the combine would be as perfect as any one yet formed. Until this is brought about, members of the trade fail to see how the long-desired rise in combing rates can be established.

No data are given as to the value of the separate businesses taken over, but the total purchase consideration for the land, mills, buildings, engines, boilers, shafting, machinery, general equipment, and good will of the 38 amalgamating firms was £1,795,356 ($8,737,099.96).

There has been as yet no annual meeting of the shareholders, but interest on the debenture stock at the rate of 4 per cent is paid every half year. However, the trading accounts for the six months from June 30, 1899, when the various businesses were taken over, to December 31 have now been audited and completed, and they show a profit, subject to provision for depreciation, of £56,887 5s. 11d. ($276,842.02). After deducting interest to venders and interest on debenture stock to December 31, there remains a surplus of £32,573 1s. 6d. ($158,516.85), which has been carried forward to the current half year. The directors did not deem it advisable to make any distribution of dividend for so short a period and have consequently carried it forward to next June 30, when the year accounts will be made up.

BRITISH COTTON AND WOOL DYERS' ASSOCIATION.

The formation of this combine, with a share capital of £2,750,000 ($13,382,875), took place only quite recently. It comprises the largest number of firms brought together under this method of forming trusts. In effect it is a consolidation of 85 per cent of the trade engaged in dyeing cotton warps and cotton yarn, wool tops, and woolen yarns in the hank for the use of manufacturers who produce all kinds of fancy cloths. Especially Yorkshire firms engaged in the dyeing of wool and tops are connected with it. This section of the trade is known as "slubbing" dyers, dealing with the various textile fibers before they reach a state fit for the looms. These concerns dye the material in the raw and partially manufactured state in order to supply fancy wool spinners with the material which produces the special mixture effects so largely used in the making of garments. Many of the firms identified with this combine have made notable successes in the cotton mercerized fabrics so popular in every market of the world. It will be seen from the following list of names that the combine comprises firms scattered throughout Yorkshire and Lancashire, as well as Scotland, many Glasgow houses being engaged in cotton-yarn dyeing. The businesses specified below include all the leading firms and companies engaged in dyeing, bleaching, printing, and sizing cotton yarns in warps and hanks and wool in the loose state, and slubbing and working with all kinds of worsted yarns. The firms who have entered the combine are:

Names and addresses of vendors.

Joseph Balme, Bradford.
Joseph Barlow & Sons.
Bradford Patent Dyeing Co., Limited, Bradford.
David Brown & Co., Dunfermline.
Brown-Lee & Fyfe, Tillicoultry.
John Buckle & Co., Bradford.
Birton & Slingsby, Radcliffe.
Caldwell & Co., Paisley.
Cochrane, Smith & Co., Selkirk.
William Cunningham & Co., Paisley.
John F. Dawson, Radcliffe.
W. Eckersell & Co., Birtle.
Fletcher Bros., Limited, Halifax.
Alfred Goodall & Co., Limited.
Oliver Greenwood, Bradford.
Heppenstall Bros., Huddersfield.
W. & J. Hilton, Radcliffe.
Holmes & Holdsworth, Bradford.
Benjamin Ingham.
Jopson, Ashworth & Edmunds, Middleton.
Kearns, Allen & Co.
Kerr & Hoegger, Limited, Manchester.
Edward Lee, Burnley.
The Marland Dyeing Co., Limited, Bury.
The Marshfield Dyeing Co., Bradford.
D. MacFarley & Sons, Paisley.
J. & J. McCallum, Paisley.
W. McConnell & Co., Glasgow.
R. Moir & Co., Accrington.
Murgatroyd & Lister, Bradford.
Henry North & Sons, Bradford.
William North & Co., Bradford.
Abraham Peel Bros., Limited, Bradford.
Adam Robinson & Sons, Bradford.
Robinson Bros., Bradford.
Isaac Robson & Sons, Huddersfield.
Rule & Leyden, Hawick.
James Scoon, Hawick.
John Siddall, Radcliffe.
Joshua Sidal & Son, Radcliffe.
Thomas Simpson & Co.
S. Smethurst & Sons, Bury.
Spencer & Exley, Halifax.
Mathew Stuttard & Bros., Limited.
John Turnbull & Sons.
W. Woodcock & Co.

By sectionalizing the trade, which really is one of the main objects of the combine, and gradually reducing the variety of colors handled in the different works, which will effect a saving in the quantity of dyestuffs used, and by the purchase of these articles by a central authority on a wholesale scale, a reduction in the cost of output will be secured. Other economies, it is anticipated, will be made by the centralization of bookkeeping and finance and by organization of the selling departments. Although there is no intention to raise prices prejudically to the trade, they may be regulated so that wasteful competition below cost price will be avoided, which, in other words, simply means that as soon as there is a favorable opportunity the present rates for dyeing will be increased. A noteworthy feature of the combine is that an agreement has been entered into with the Bradford Dyers' Association, Limited, whereby provision is made for cooperation in matters affecting mutual interests, and for the acquisition by each of the associations of a considerable holding in the share capital of the other. As in other cases, there are no individual profits specified in the prospectus. The books of the respective firms having been officially gone through, it is shown that taking the average profits for a period covering in most cases the past five years, they are sufficient to provide for the following: 4 per cent on £620,000 ($3,017,230) debenture stock, £24,000 ($120,689.20); 7 per cent on £1,200,000 ($5,839,800) ordinary shares, £84,000 ($408,786); total, £108,000 ($529,475.20). If the figures may be relied on, there is a fair prospect of this combine being as successful in its operations as the Bradford Dyers' Association.

YORKSHIRE SOAP MAKERS' ASSOCIATION, LIMITED.

This combine was attempted, and while closely identified with the textile trades of this district, it was doomed to failure from the start, and subscribers have had their checks returned. There were many unattractive features about the trust, and several influential gentlemen connected with the textile trade expressed beforehand their opinion that the scheme would not meet with support.

It is stated that a plan is on foot by which the assenting firms will carry out the undertaking without offering any shares to the public, which, in other words, may be taken to mean that the firms in question will probably band themselves together and form a working agreement to regulate the prices of their varied commodities.

REMARKS.

The above are the trusts which so far have been submitted to the British public for support in this district, but there is in embryo a combine which will embrace all the firms engaged in the manufacture of cards for the wollen and worsted trade. There are about thirty firms carrying on business, and more that half have already signified their intention to form a syndicate, but it is felt that such a combination should comprise at least 75 per cent of the whole trade. It is expected that the capital of the combination, if it is formed, will be about £200,000 ($973,300) or £250,000 ($1,216,625).

There is also a movement which it is hoped will result in the formation of a trust comprising the Bradford dress-goods manufacturers. Already a meeting has been held, and invitations have been sent asking whether firms would be willing to join in the syndicate. The dress-goods manufacturers in this district are so multitudinous and the variety of goods made is so great that such a trust would be almost past human genius to manage. Another proposed combine covers the interests of the Bradford worsted spinners. Here, again, the trade is confronted with such a huge scheme that many express the opinion that it will never be accomplished. The matter has been freely talked over by many leading worsted spinners in this district with the promoter of textile combines, and although there is a good deal yet to be done, I am assured that matters are proceeding satisfactorily. The proposed combination will include not only the spinners of fine and "Botany" yarns, but also of "crossbreds."

I inclose copy of the report and accounts of the Bradford Dyers' Association, Limited, to December 31, 1899, and also report of the proceedings at the second ordinary general meeting.[1]

ERASTUS S. DAY, *Consul.*

BRADFORD, *May 19, 1900.*

FALMOUTH.

Consul Fox writes, under date of June 27, 1900, that he is not aware that there are any trusts in his district.

LEEDS.

I regret that I am unable to report anything of value regarding trade combinations. Business men here generally appear to have little actual knowledge of them, and from those thus far formed upon a legitimate basis no unfavorable results have been experienced, nor are they anticipated. Apparently, a material advantage is gained in saving expense and avoiding ruinous competition.

It is frequently stated that much of the success of this country has arisen from individual effort, and that upon such effort much of its success in the future will depend. By many the fear is expressed that combinations tend to the crushing out of individual responsibility.

It is generally felt that combinations of private firms, ostensibly for the purpose of economy of production and regulation of prices, are on such a basis that investors do not regard them with much favor, and brokers carefully watch the accounts of such combinations, for being in nearly every case overcapitalized, they are the first to feel the effect of a falling off in trade.

For a list of the trusts or combinations, I inclose a cutting from the Financial Times of April 30 last.

LEWIS DEXTER, *Consul.*

LEEDS, *May 28, 1900.*

[Extract from the Financial Times.]

Few people recognize how deep a root the principle of amalgamation has struck into our country. That of late years there has been a tendency toward following the American example has been patent to every newspaper reader, but the cumulative effect has not yet been borne in upon the public. In view of the importance, both commercial and financial, of the inauguration of this new era in company promotion, we think it well to bring vividly before our readers the extent to which the new movement has already gone, and we venture to say that the following table of consolidations floated in England during the past two years and a half will cause no little surprise, even to many close students of the company world:

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[1] Filed for reference in Bureau of Foreign Commerce.

Date.	Name.	Number of businesses.	Capital.	
			English money.	United States equivalent.
1897.				
Nov. 25	English sewing cotton	15	£2,750,000	$13,382,875
1898.				
May 6	Fine-cotton spinners and doublers	31	6,000,000	29,199,000
Dec. 1	American thread	13	3,720,000	18,103,380
Dec. 14	Bradford dyers	22	4,500,000	21,899,250
1899.				
July 4	Yorkshire indigo, scarlet, and color dyers	11	600,000	2,919,900
July 6	Bradford coal merchants and consumers	8	250,000	1,216,625
Oct. 9	Yorkshire wool combers	38	2,500,000	12,166,250
Nov. 1	United indigo and chemical	8	250,000	1,216,625
Dec. 8	Calico printers	60	9,200,000	44,771,800
1900.				
Feb. 22	Wall paper manufacturers	28	4,200,000	20,439,300
Mar. 1	United velvet cutters	4	300,000	1,459,950
Apr. 4	British cotton and wool dyers	46	2,750,000	13,382,875
Apr. 28	Yorkshire soap makers	12	400,000	1,946,600
	Total	296	37,420,000	182,104,490

When, at the end of 1897, the English Sewing Cotton Company set the fashion with its amalgamation of 15 businesses and its capitalization of £2,750,000, the venture was considered sufficiently daring; but within two years the country had become so accustomed to such promotions that it received without surprise the prospectus of the Calico Printers' Association, amalgamating no less than 60 businesses, with a capitalization of nearly £9,250,000. It is obvious, after such a start, that the combine idea is no mere flash in the pan, but that we shall have many similar ventures to consider within the next few years; indeed, we have already announced that toward Whitsuntide two more will be offered for subscription—namely, the Lancashire Bleachers' Association and the Association of Nottingham and Ayrshire Lace Curtain Manufacturers—while yet a third, combining the worsted spinners of the West Riding, is also in hand, and is going to be, it is stated, the largest of all the textile amalgamations. Still more names are mentioned, but those we have named are actually in an advanced stage of formation, the indefatigable Mr. Scott Lings being hard at work exploiting the bonanza of company promotion, the rich gold deposits in which he has discovered. At present, as our table shows, we are a very long way behind the United States in regard to the capital thrown into these industrial combinations; but £37,500,000 is no inconsiderable sum, and if we continue to produce these ventures at the rate kept up since the end of 1897, we shall be treading on the heels of the Yankees before many years are over.

LIVERPOOL.

So far as Liverpool is concerned, there are only three trusts or trade combinations of any magnitude.

THE UNITED ALKALI COMPANY, LIMITED.

This is a combination of chemical manufacturers of Liverpool and district, formed in the year 1891. The authorized capital is £8,500,000 ($41,310,000), in shares of £10 ($48.66) each, half in ordinary and half in 7 per cent cumulative preference shares (ranking for priority as to capital), and £2,500,000 ($12,150,000) in 5 per cent debentures. The total capital issued is £8,218,670 ($39,942,736) made up as follows: £2,893,430 ($14,061,969) in ordinary shares (£10=$48.66 each),

£2,825,240 ($14,062,069) in 7 per cent preference shares (£10=$48.66 each), £2,500,000 ($12,150,000) in debentures.

The debenture stock carries 5 per cent interest, payable January 1 and July 1, and is redeemable at 110 per cent, at the option of the company, after ten years from 1891.

In the year 1891, the combination paid 5 per cent on the ordinary shares; in 1892, 6 per cent, in 1893, 5 per cent; in 1894, no dividend; in 1895, 1 per cent; in 1896, 2 per cent. But in 1897 and 1898 only 1 per cent preference dividend was paid, and in 1899 3½ per cent on the preference shares.

The purchase price paid by the combination to the 49 firms comprising it was £6,851,500 ($33,295,290), as follows: £1,033,820 ($5,024,365) in cash, £1,470,430 ($7,146,289) in debenture stock, £1,638,290 ($7,962,089) in preference shares, and £2,708,960 ($13,165,545) in ordinary shares. As, however, two of the largest chemical manufacturers in the district did not join the combination, a monopoly of the trade was prevented, and keen competition ensued. This competition, together with a decrease in business, resulted in low prices, but with a return of activity of trade and an agreement as to distribution in prices, the position of the company improved. Thus far, however, the combination has had very little effect upon prices, but it is claimed that as a result of the combination, a reduction has been made in the cost of production.

The latest market quotations for this combination's shares are as follows: Ordinary shares, £2 7s. 6d. ($11.55); preference shares, £9 10s. ($46.22); debentures, £109 10s. to 110 ($532.87 to $535.31).

The wages paid to laborers in the United Alkali Company vary from 18s. to 21s. ($4.38 to $5.10) per week, and the rates paid to process men vary from 25s. to 40s. ($6.07 to $9.73) per week, there being a great variety of processes.

THE SALT UNION, LIMITED.

The Salt Union, Limited, is a combination of salt manufacturers and salt mine owners, and was organized in the year 1888. The authorized capital is £4,200,000 ($20,412,000), made up as follows: £2,000,000 ($9,720,000) in ordinary shares, £10 ($48.66 each); £1,000,000 ($4,860,000) in 7 per cent noncumulative preference shares, £10 ($48.66 each); £1,000,000 ($4,860,000) in first mortgage 4½ per cent perpetual debenture stock, £200,000 ($972,000) in 4½ per cent mortgage debenture stock.

The purchase money was £3,704,519 ($18,003,962), of which £50,000 ($243,000) was in debentures; £70,000 ($340,200) was in preference shares; £889,820 ($4,324,525) was in ordinary shares, and the balance in cash. When the combination was formed, the ordinary shares were over applied for and went to a considerable premium. In 1889, the first year, a dividend of 10 per cent was paid on the ordinary shares; in 1890, 7 per cent; in 1891 and 1892, 5 per cent; in 1893, 3 per cent; in 1894, 2½ per cent; in 1895, 2 per cent; in 1896, 1 per cent; in 1897 the preference dividend only was paid, the rate being 1¼ per cent, and in 1898 nothing was paid on either class of shares.

This combination in its infancy monopolized the salt trade, and immediately after its formation prices were very considerably raised, and as there was no other source of supply in this district or other parts of the country, the advanced prices had to be paid and were for a time maintained. This had the effect of encouraging foreign competition, as well as causing private concerns to search for new salt districts. Several new brine springs were discovered and worked by private concerns, and as competition increased the combination's prices decreased. Trade, however, so it is claimed, has been driven away, a great deal of it to competing firms in other parts of the Kingdom, while some of the foreign trade, it is said, has been secured by Germany. Since the formation of the Salt Union, Limited, from fifteen to twenty private concerns have been established and competition has been keen. Quite recently, an agreement between these firms and the combination has been made to regulate the prices, but it is doubtful whether it will be continued after the expiration of twelve months, the time stipulated in the agreement.

The present market prices of this combination's shares are: Ordinary shares, £1 5s. ($6.07); preference shares, £3 5s. ($14.62); debentures, £89 ($433.11); debenture stock, mortgage, £84 to £85 ($408.76 to $413.65).

THE LIVERPOOL WAREHOUSING COMPANY, LIMITED.

This company was formed in 1895 with the object of reducing the working expenses by having all the warehouses worked by one central staff, and also with a view of stimulating prices. At the time of its formation, the public warehouses of the city were controlled by about twelve private concerns, six of whom joined the combination, the others remaining out. The authorized capital of the combination is £1,050,000 ($5,103,000), fully paid up, as follows: £650,000 ($3,159,000) in shares of £10 ($48.66), half ordinary and half 5½ per cent cumulative preference shares, and £400,000 ($1,954,000) 4 per cent debenture stock.

In 1896, to September 30, a dividend of 4 per cent was paid on the ordinary shares; for the years 1896–97 and 1897–98 only a preference dividend was paid, and for 1898–99, the ordinary shares received 2½ per cent.

As only about half of the warehouse owners joined the combination, there was no monopoly created, those outside being competitors excepting in certain descriptions of merchandise which the combination had secured, consequently the rates have not materially increased.

The ordinary and preference shares are now quoted far below par. The present market prices are as follows: Ordinary shares, £2 8s. 9d. ($11.85); preference shares, £8 12s. 6d. ($41.97); debentures, £103 ($501.24).

An attempt was made to form a combination among distillers, to be called the Wine and Spirit Union, but it did not succeed and the matter fell through.

JAMES BOYLE, *Consul.*

LIVERPOOL, *May 8, 1900.*

MANCHESTER.

To answer Department's instruction, I applied to the five trade combinations in this consular district, viz: The Fine Cotton Spinners and Doublers' Association, Limited; the English Sewing Cotton Company, Limited; the Calico Printers' Association, Limited; the English Velvet and Cord Dyers' Association, Limited; and the Wall Paper Manufacturers, Limited, with the following results:

THE FINE COTTON SPINNERS AND DOUBLERS' ASSOCIATION, LIMITED.

For information in regard to this association, I have to thank the Hon. W. H. Holland, M. P., one of its chief directors, who replied as follows:

HOUSE OF COMMONS, *London, May 4, 1900.*

DEAR MR. GRINNELL: I am sorry that the head office of the Fine Cotton Spinners and Doublers' Association, Limited, have not replied to your inquiries, for they could do so with greater detail than myself, owing to their having access to the books.

The style of the firm will sufficiently indicate the kind of business in which we are engaged. We spin all counts from 1's to 400's, but employ nothing but sea islands, or high-grade Egyptian cotton.

Our issued and paid-up capital is made up of £2,000,000 ($9,733,000) debentures, £2,000,000 ($9,733,000) 5 per cent cumulative preference shares, £1,648,000 ($8,019,929) ordinary shares, on which latter we have hitherto paid 8 per cent.

The company was formed in March, 1898. The normal value of the working stock is about £1,000,000 ($4,866,500). The rest of the capital is absorbed by book debts, plant, and good will. I am unable to state the value of the plant, as no separate valuation was made on the formation of the company. The purchase price was based entirely on the profit-earning capacity of each individual concern.

Prices have been improved somewhat as a result of combination, but the chief factor in enhancing them has been the great scarcity and dearness of our raw material.

Unwarranted and ruinous cutting of prices has undoubtedly been stopped.

Production has been increased, owing to a leveling up of those concerns which were lagging behind the best.

The effect of our combination on wages has been beneficial, for the hands are mostly on piecework, so that increased production in itself involves increased earnings. Besides this, an advance of 5 per cent in the prices paid for spinning throughout the Lancashire cotton trade has further improved the position of the workers this year, but this is not attributable to combinations.

We have found it advantageous to be able to transfer orders (with the consent of buyers) from one associated concern which has a surplus, to another which may be running short. In this way, our machinery has had fuller employment than would have been the case without combination. Vigorous management of the separate concerns has been secured by a system of paying by results. Also, in the purchase of stores by the central office, substantial economies have been effected.

On the whole, therefore, our combination has been and continues very successful, but the result would have been less favorable had it not been for the very great tact of Mr. Dixon, our managing director, which has evoked the loyal cooperation and hearty good will of everybody working under him.

Hoping that the above information will serve your purpose, believe me, very sincerely yours,

W. H. HOLLAND.

To W. F. GRINNELL, Esq., etc.,
United States Consul, Manchester.

Since the receipt of the above, the third ordinary general meeting of the association was held on May 21, 1900, and I inclose copy, cut from the Manchester Guardian.[1]

The market value of the company's stock is: Ordinary shares 38s. 6d. ($9.36) per £1 ($4.86) share; cumulative preference shares, 23s. 9d. ($5.77) per £1 ($4.86) share, and first mortgage debenture £103 10s. ($503.52) per £100 ($486.50) share.

THE ENGLISH SEWING COTTON COMPANY, LIMITED.

Up to now this association has only acknowledged receipt of the letter of inquiry, and the matter is receiving attention. The value of shares is as follows: Ordinary shares, 34s. 3d. ($8.33) per £1 ($4.86) share; cumulative preference shares, 22s. ($5.35) per £1 ($4.86) share.

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[1] Filed for reference in Bureau of Foreign Commerce.

THE CALICO PRINTERS' ASSOCIATION, LIMITED.

This combination has only just been formed. The managers reply as follows:

> We beg to acknowledge your letter of yesterday's date, and in reply have to inform you that it is so short a time since our company was formed that we are unable to give you the particulars you require at present.

No stock quotations are published.

THE ENGLISH VELVET AND CORD DYERS' ASSOCIATION, LIMITED.

From this association, I received the following:

> We are favored with yours of the 30th ultimo in which you do us the honor to inclose on behalf of the State Department of Washington copy of a circular asking for certain information in regard to trade combinations in this consular district. In reply I am desired to say that this association is a private company and that shares have not been issued to the public, for which reason you will quite understand that we are hardly in a position to afford the information asked for.

No stock quotations published.

THE WALL PAPER MANUFACTURERS, LIMITED.

I made two applications to this company; first to its secretary, and not receiving a satisfactory reply, to W. B. Huntingdon, esq., its chief director. I append his reply:

> The difficulty the secretary no doubt had in replying to your inquiries in regard to trade combinations is that our company has been such a short time in existence.
>
> What we contemplate is that by the economies we shall be able to effect we can without any reduction of wages so reduce the cost of production, that even lower prices for goods will give us as good a net result on the year's trading. We do not intend to inflate prices; this in our opinion would be unsound policy. Of course there will be fluctuations in prices, and the increased cost of material and coal makes an upward tendency inevitable. I shall be glad at some future time to let you know the result of our experience.

No stock quotations published.

WILLIAM F. GRINNELL, *Consul.*

MANCHESTER, *May 31, 1900.*

NEWCASTLE-UPON-TYNE.

In this district, there appear to be no trusts or trade combinations, in the sense of several firms combining with a specific purpose, say of enforcing uniform prices.

The trusts or combines already formed in this country have their headquarters in London or in Manchester. I, however, give below a sketch of three combines which have come under my notice.

The Wall Paper Manufacturers, Limited, registered offices, Belgrave Mills, Darwen; London offices, 142 Queen Victoria street E. C., is a powerful association, and is attempting to coerce all other manufacturers to use only goods made by themselves. The association comprises thirty-one undertakings, having a capital of $20,439,300.

The Calico Printers' Association, Limited, is a combination of calico printers and merchants to rule prices in this important industry, having a total capital of $40,000,000. The registered office is No. 2 Charlotte street, Manchester. Prospectus inclosed.[1]

The only two companies who manufacture book cloth (for bookbinders' use) in this country are amalgamated and form a combine or trust, and rule prices in this particular trade. They are: The Winterbottom Book Cloth Company, Limited, registered office, 12 Newton street, Piccadilly, Manchester; and the Albion Book Cloth Company, Albion Mills, Manchester.

There are a great number of firms in the shipbuilding, engineering, coal-mining, brewing, and other industries in this district formed into limited liability companies, with large capital, who, however, do not control prices, and do not come under the head of trusts or trade combinations in the sense of the Department's inquiry.

HORACE W. METCALF, *Consul.*

NEWCASTLE-UPON-TYNE, *June 7, 1900.*

NOTTINGHAM.

Nine-tenths of all English trade combinations have their headquarters in London. Particular information as to capitalization, etc., is not obtainable in the provinces. To entirely avoid prejudice, so far as this consular district is concerned, I referred the departmental inquiry on the subject to Consular Agent S. S. Partridge, at Leicester. He is an Englishman, very well posted, and has summarized the local situation as follows:

Railway companies combine to arrange a general tariff of fares and freights, to avoid undercutting. Brewery companies also, in certain localities, such as Burton on Trent, agree together upon various questions affecting their trade generally, as for instance their recent agreement that the price of beer should be raised to meet the increased excise duty lately imposed by the Government upon that commodity. Many attempts have been made to form "rings" or "corners" in imported foodstuffs and raw materials, but these are of an entirely different nature to trusts and trade combinations, being merely speculative dealing or gambling in "futures." Another instance of considerable importance is the English cooperative system, which is rapidly on the increase. Nearly every town and village in the Kingdom has its cooperative society, which is able to compete successfully with other trades in the locality, and deals with many trades, such as butchers, bakers, grocers, oilmen, drapers, milliners, clothiers, bootmakers, builders, and often includes also a land society and a savings bank. Some of these cooperative societies attain huge dimensions, and, dealing as importers, manufacturers, wholesale merchants, and retailers, are enabled in certain districts to almost stifle trade competition. Municipal corporations also embark upon mercantile enterprises to a large extent, and carry on such businesses as water supplying, gas manufacture, gas fitting, coal and coke dealing, tram and omnibus service, electrical and telephonic service, baths, washhouses and slaughterhouses, lodging houses, etc. These corporations also, on account of the large size of their undertakings, the cheap rate at which they raise loans, and the fact that large profits are not aimed at, are enabled to crush out competitors. The Leicester municipal authorities, for instance, are at present carrying on the following businesses, in addition to the management of the usual affairs of the borough: Water, gas and electric light service, baths, washhouses and slaughterhouses, gas fitting, retailing stoves and gas fittings, electrical engineering, retailing electrical fittings, and retailing coke, breeze, slack, gas tar, pitch, and other by-products. In the case of water supply, the four boroughs of Leicester, Sheffield, Nottingham, and Derby have conjointly acquired by parliamentary authority almost the whole of the watershed of the river Derwent as a means of supply, entailing an expenditure of £8,000,000 ($38,932,000) and exhausting the only available source of pure water over a considerable area.

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[1] Filed for reference in Bureau of Foreign Commerce.

The result of the inquiries made on the subject of the present report discloses that no trust or combination has hitherto originated in or has its headquarters within the district of this consular agency. At the same time, several local industries are interested in or affected by various combinations having their origin elsewhere. Among such are the following:

(1) The combination of fine cotton spinners in Lancashire, which, doubtless, has been or will be fully reported on by the consul at Manchester. This combination affects, among other trades, that of the local elastic-web manufacturers, but there is no firm in this district connected with the trust, and consequently it has been found impossible to obtain details or statistics on the subject.

(2) Sewing cotton combinations. There are several of these in the United Kingdom, but the only one having direct connection with this district is the English Sewing Cotton Company, Limited, with its registered office at Manchester. This company includes a large number of the principal mills in the United Kingdom. It has a total nominal authorized capital of £3,000,000 ($14,599,500), of which £2,750,080 has been already issued, and it is proposed forthwith to issue the balance of £249,920. The company, which includes one large cotton-doubling mill in Leicester, was established in 1897, and consists at the present time of about sixteen firms, each of which continues to carry on its own business in its original firm name. So far as the Leicester firm is concerned it does only cotton doubling and no spinning, but some of the other firms spin, and the spun yarn being purchased from them by others in the combination, a considerable saving is effected, the profits of outsiders being avoided. It is stated that the net profits of the concern at the present time show about 10 per cent on the capital embarked. A firm known as the American Thread Company has been established in the United States for similar purposes, also in connection with the English Sewing Cotton Company.

Another similar trust, of much larger proportions, is known as "J. & P. Coats, Limited," of Paisley, in Scotland, which is in some way interested in or connected with the English Sewing Cotton Company, Limited. It was formerly known as "The Central Agency," was organized by Messrs. J. & P. Coats, and consists of about half a dozen large firms.

Another thread trust having an agency in Leicester is the Linen Thread Company, Limited, of Glasgow. This company consists of an amalgamation of three important firms. Each of these manages its own business, but the profits are pooled, and competition between the three companies is avoided. No statistics have been procurable with reference to this trust. The senior partner in a local firm of sewing-cotton manufacturers, not connected with either of the firms before referred to, states that the cessation of competition among the firms within the combination has benefited those outside by advancing the general market prices of the goods, but has only very slightly affected the rate of wages.

(3) Among the cotton and woolen dyers there exists a combination known as the British Lustering Syndicate, in which nearly all dyers are included. Each firm contributes to the syndicate an agreed sum for working expenses, the annual contribution averaging about £50 ($243.32) each. The syndicate was organized in 1896. The object of the concern is simply to protect a patent known as Lehman's patent, by which the dyers bind themselves to an agreed price list. Among the dyers generally other combinations exist, one being at Bradford, but so far as can be ascertained no local dyers take any part therein, and no details thereof are obtainable. The effect of the British Lustering Syndicate has been to keep up prices, and its members, by mutual dealing, save expenses very considerably and there is certainly a decided increase in the profits. As regards dyers' wages, these vary in different districts; for instance, wages for dyeing, trimming, and finishing are higher in Leicester than in Nottingham. From another source it is found that as a consequence of this combination, manufacturers have to pay 1s. 3d. (30 cents) per pound for mercerizing or lustering in this country, while the same work could be done for 10d. (20 cents) abroad.

(4) Certain trades and processes using alkali are affected by an extensive trust known as the United Alkali Company, but the effect has not been to increase the prices, as several very extensive concerns, such as that of Messrs, Brunner, Mond & Co., have not joined in the trust.

(5) Wall-paper trust. This combination affects the paper hangers and wall-paper dealers in this district, there being a considerable advance in prices of this class of goods. It is believed that all dealers in wall paper in this district are compelled to deal exclusively with the "ring" for the period of seven years, and that anyone dealing with outsiders would certainly be boycotted by firms constituting the trust.

(6) Lastly, the coal ring. In making this report, it is proper that casual reference should be made to the proceedings of this body, although no information is accessible as to its working locally. That such a ring exists, for the purpose of raising the price of coal, seems to be a certainty, although denied by some of the coal owners. Meetings of colliery proprietors have been held from time to time in various parts of the country. The proceedings have been conducted with great secrecy, but the result is that the price of coal for all purposes has been raised and maintained at from 50 to 100 per cent increase, thereby proportionately advancing the cost of production in every class of manufacture, and also affecting trade generally, as well as the household consumer, to a serious degree.

Besides the above combinations affecting this district, attempts have been made to form others locally. A combination of the local worsted spinners will, in all probability, come into effect shortly, but at present has not advanced far enough to enable definite information as to the terms of the suggested amalgamation to be obtained. A further syndicate of general worsted spinners throughout the country is in course of formation; but here, again, arrangements are not yet completed. Probably, some of the Leicester spinners will participate in it.

An effort was made some time ago to form a trust in the hosiery trade, but this met with but scant reception. The combination was principally pushed from Nottingham, but, as stated, has been a failure so far. An attempt has also been made to bring about a combination of the local dyers, but it has not yet taken shape.

One of the staple industries of this section is the boot and shoe trade, and among the newly proposed "combines" is one affecting this industry, but thus far the movement has not made much progress.

With this report the following documents[1] are submitted:

(1) English Sewing Cotton Company, Limited. Circular letter of May 10, 1900, with reference to issue of balance of capital.

(2) Prospectus of the American Thread Company.

(3) Cotton hank price list of the British Lustering Syndicate.

(4) Copy of proposed form of agreement for dyers' syndicate.

(5) Extract from the Draper's Record of May 5, 1900, containing market stock and share list of industrial concerns connected with the drapery trade.

S. C. McFarland, *Consul.*

Nottingham, *May 30, 1900.*

SUPPLEMENTARY.

Supplementary to Consul McFarland's report of May 30, 1900, in regard to trade combinations, Consular Agent S. S. Partridge, of Leicester, submits the following in regard to the contemplated combination in the pottery, stoneware, and fire-clay goods for sanitary purposes:

In the extreme west of this district are several large businesses engaged in the manufacture of pottery and stoneware and fire-clay goods for sanitary purposes. All these businesses are amalgamated, with practically all other concerns of a similar character in the United Kingdom, in an association called the Association of Sanitary Stoneware and Fire Clay Goods Manufacturers. The Kingdom is divided into six sections or branch associations, of which the Midland is the largest. Very few businesses are outside this trust, and their competition is stated to be infinitesimal.

The profits of the various units of the association are not pooled, nor are the businesses controlled by the association, the objects of which are simply to fix and maintain prices and to regulate matters affecting the trade. A price list agreed upon by the association binds all the members, who thus avoid competition with one another in respect of the prices charged. The workmen employed in the trade are paid high wages, the work requiring skilled labor to a considerable extent; but wages have not been affected by the formation of the trust.

W. T. Cartwright, *Vice-Consul.*

Nottingham, *June 7, 1900.*

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[1] Filed for reference in Bureau of Foreign Commerce.

PLYMOUTH.

After careful and extended inquiry, I find that there are no trusts or trade combinations in this district. This is accounted for by the fact that Devon and Cornwall are agricultural and mining counties, there being but few manufactories, and these small. I have interviewed the leading bankers, business men, and solicitors, and find that trusts are unknown here. I can find no literature on the subject in the book stores, save that published in the United States.

JOS. G. STEPHENS, *Consul.*

PLYMOUTH, *May 8, 1900.*

NEW TRUSTS IN GREAT BRITAIN.

The following statements, already published in the Consular Reports, are reprinted here:

SPINNERS' AND SHIPPING TRUST.

Consul Halstead writes from Birmingham, March 1, 1900, in regard to the apathy with which the people of Great Britain regard the formation of trusts.

The news editor of the London Mail (circulation, one million two hundred and odd thousand) gives only some thirty-two lines to an item of the kind, and the editor in chief is not disturbed to the extent of a single editorial paragraph. Except an approving paragraph or two in the financial columns when the flotation is advertised, one can look in vain in other papers for either news or editorial notice referring to English trusts. Mr. Halstead continues:

I have a clipping from the February 1 issue of the London Daily Mail. It is an announcement of a proposed formation of a worsted spinners' trust. This trust is to have a capital of £18,000,000 ($87,597,000), and one hundred and six firms are concerned; yet the news editor of the Mail judges this item to be worth only a two-line head, twenty-eight lines of small type, set solid. The item is as follows:

ANOTHER HUGE TRUST—BRADFORD SPINNERS DISCUSS AN £18,000,000 COMBINE.

A meeting of spinners engaged in the worsted trade was held yesterday in Bradford to consider the question of forming a combination of firms in that branch of business. One hundred and six firms were represented.

Mr. Scott Ling, of Manchester, who presided, explained that it was proposed to buy out firms on the basis of allowing nothing for good will of concerns which show only 5 per cent profit. All profit beyond 5 per cent would be multiplied seven and a half times, and that amount allowed for good will. On such a basis, he calculated they could show 7½ to 8 per cent for ordinary shareholders.

A resolution in favor of combination was unanimously passed, and the following committee appointed to devise a scheme: Mr. Ickeringill, of Keighley; Mr. James Drummond, of Bradford; Mr. Alfred Haley, of Wakefield; Mr. A. Anderton, of Checkheaton; Mr. J. Hoyle, of Halifax; Mr. Smithies, of Elland, and Mr. H. Whitehead, of Bradford.

Opinion is divided as to the possibility of a successful combination. Some put the probable total capital at £18,000,000.

I take from the same issue of the Daily Mail the following extract in regard to the amalgamation as a "trust" of two great South African steamship companies:

CAPE SHIPPING COMBINATION.

Details are now fully arranged of the recently announced amalgamation of the two well-known Cape mail companies.

The object of the amalgamation is to provide for the more efficient working of the South African trade and for the carrying out of the joint mail contract which the companies have made with the Cape government for ten years from October next.

The Castle Company changes its name to the "Union-Castle Mail Steamship Company, Limited," takes over the property and liabilities of the Union Company, and increases its nominal capital to £2,000,000. The directorates also combine, and Sir Francis Evans, chairman and managing director of the Union, joins the firms of Donald Currie & Co. in the control of the amalgamated concern.

A new 4 per cent debenture stock will be created, for which the shareholders in both companies will be allowed to exchange their present stock.

It is proposed that the shares of the united company shall be £10 instead of £20 shares, and the shareholders of the Union Company will receive for their paid-up capital an allotment of an equal nominal amount of fully paid-up shares of the Union Castle Company, and in addition will receive £6 13s. 4d. per share, payable in 4 per cent debenture stock.

WALL-PAPER TRUST.

Under date of Birmingham, February 16, 1900, Consul Halstead says:

Combinations of the kind which at home we call "trusts" are created here without attracting public attention or causing alarm, though no trouble is taken to keep the facts from getting to the public, and it is rare that one hears a voice raised against trusts. A wall-paper combination with £6,000,000 ($29,199,000) of capital is announced, and receives from the London Daily Mail, a newspaper which is very active in news gathering, only the scant attention of a two-line head, twenty-one lines of type set solid, and an inconspicuous position. The Mail article reads as follows.

The Association of Wall-Paper Manufacturers, after working jointly since September 30, are now preparing a prospectus, and an issue of capital will be made within the next few days.

The company is already registered with £4,000,000 of share capital, plus debentures, and the new issue will probably be £6,000,000.

Practically every maker of paper hangings in the Kingdom is stated to be embraced by the federation, including Scotch, Lancashire, Yorkshire, and London concerns. The chairman of the combination is W. P. Huntington, late member of Parliament for the Darwen division of Lancashire, and sheriff of Lancashire.

Many important consolidations, adjustments, and economies have already been effected since the formation of the federation.

TRUST IN BLEACHING TRADE.

Consul Halstead writes from Birmingham, February 24, 1900:

Wednesday's edition of the London Mail refers to the formation of a bleaching trust with a capitalization of £10,000,000 or £12,000,000. This, in the judgment of the managing editor, is worthy of only one headline, twenty-two lines of nonpareil type, set solid. The Daily Mail article reads as follows:

BLEACHING-TRADE COMBINE.

The Lancashire bleaching trade will shortly be in the hands of a powerful company.

It is said that the combination will involve the capitalization of from £10,000,000 to £12,000,000 ($48,665,000 to $58,398,000), and the object in view is to prevent individual concerns from indulging in sharp practices, cutting prices, discounts, etc.

Individual businesses are to be taken over and worked from March 31 by the company, which will be known as the Lancashire Bleachers' Association, Limited, and the prospectus will probably be in the hands of the public soon after that date.

Experts are confident that there is no branch of the textile industries which will so well and profitably lend itself to the adoption of joint-stock-combination principles as that of the Lancashire bleaching trade.

A provisional committee has been appointed from among the members of the largest firms.

Mr. Halstead adds, July 23, 1900:

In the advertising columns of the Times, Mail, Express, and other London and provincial papers appears to-day the prospectus of the Bleachers' Association, Limited, the cotton bleaching "trust" the proposed formation of which I reported some time ago. The share capital of this new "trust" is given at £6,000,000, and added to this as an exact statement of the money involved there are £2,250,000 in 4½ per cent first mortgage debenture stock, making a total of £8,250,000, equivalent in American money to $40,148,625. Power is reserved by the "trust" deed to create further debenture stock in addition to the amount announced, provided it is necessary. I have not seen, in the five daily newspapers I have read this morning, a single editorial comment on the formation of this great "trust," which is, by the way, a full brother organization to the Bradford Dyers' Association, Limited, an equally great "trust," and with which it has a working arrangement, which is shown by this paragraph, taken from the prospectus:

> A few of the amalgamated firms are dyers as well as bleachers, and the two businesses may be usefully and profitably continued side by side. There is, however, no intention of competing with the Bradford Dyers' Association, Limited, and in the case of one firm which carries on at one of its works piece dyeing of the Bradford class,[1] the company has arranged to transfer the dye works to that association.

The prospectus states that the company has been formed with the object of acquiring and amalgamating numerous firms and companies engaged in the bleaching trade and of strengthening and extending various associations which previously existed for various purposes in connection with the trade.

The names of the fifty-three firms which have entered into contract for the sale of their businesses to the "trust" are given, and are as follows:

Richard Ainsworth, Son & Co., Halliwell Bleachworks, Bolton, established 1760.

The Birkacre Company, Limited (bleaching business only), Birkacre Bleachworks, Chorley, established 1871.

John & Henry Bleachley, Myrtle Grove Bleachworks, Prestwich, established 1799.

Thomas Ridgway Bridson & Sons, Bolton Bleachworks, Bolton, established prior to 1800.

Thomas Ridgway Bridson & Sons, Lever Bank Bleachworks, Little Lever, established prior to 1832.

W. E. Buckley & Co., Limited, Pilsworth Bleachworks, Whitefield, near Manchester, established 1878.

Buckley & Brennand, Seedley Bleachworks, Seedley, established 1887.

R. & A. Chambers, Limited, Spring Waters Bleachworks, Whitefield, near Manchester, established 1856.

Thomas Cross & Co., Limited, Mortfield Bleachworks, Bolton, established 1820.

Davies & Eckersley, Limited, Huyton Bleachworks, Adlington, Lancashire, established 1831.

Deeply Vale & Co., Limited, Deeply Vale, near Bury.

Eccles Bleaching Company, Limited, Bentcliffe Works, Eccles, established 1877.

Eden & Thwaites, Limited, Waters Meeting Bleachworks, Bolton, established 1770.

Forrest, Gillies & Co., Lanfine Bleachworks, New Milns, Ayrshire, established 1882.

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[1] I think this means dyeing of wool.—Consul.

Andrew Greenhalgh, Clough Bleachworks, Radcliffe, established 1831.
Andrew Greenhalgh, Ballydown Bleachworks, Banbridge, established 1820.
Edward Hall & Bros., Limited, Whaley Bridge Bleachworks, Whaley Bridge, established 1830.
Adam Hamilton & Sons, Blackland Mill, near Paisley, established 1780.
Handforth Bleaching Company, Limited, Handforth, established 1860.
James Hardcastle & Co., Bradshaw Works, Bolton, established 1784.
Thomas Hardcastle & Son, Firewood Works, Bolton, established 1803.
Hepburn & Co., Limited, The Square Works, Ramsbottom, established prior to 1800.
Robert Heywood, Crescent Bleachworks, Salford, established 1838.
Horidge & Co., Raikes Bleachworks, Bolton, established 1822.
The Irkdale Bleachworks Company, Limited, Irkdale Works, Middleton, established 1874.
Kay & Smith, Lands End Works, Middleton, established prior to 1820.
The Kersal Bleaching Company, Kersal Vale Bleachworks, Higher Broughton, established 1892.
A. J. King & Co., Ingersley Vale, Bollington, near Macclesfield, established 1876.
Kirkpatrick Brothers, Ballyclare Bleachworks, Ballyclare, County Antrim, established prior to 1800.
Knowles & Green, Undershore Bleachworks, Bolton, established 1800.
Thomas Lewis Linsey, Hollins Vale Bleachworks, Whitefield, established 1849.
Longworth & Co., Springfield Bleachworks, Astley Bridge, Bolton, established 1840.
James McHaffie & Son, Kirktonfield, Neilston, established 1817.
John McNab & Co., Midtownfield, Howwood, New Brunswick, established 1825.
Melland & Coward, Limited, Heaton Mersey, Manchester, established 1820.
H. Milner & Co., Northdean Bleachworks, Pendlebury, established 1885.
William Mosley, Cheadle Bleachworks, Cheadle, Manchester, established 1875.
George Murton & Co., Sharples Bleachworks and Mill Hill Bleachworks, Bolton, established 1845.
The Rawtentsall Bleaching Company, Rawtentsall, established 1884.
Thomas Ridgway & Co., Wallsuches Bleachworks, Horwich, established 1801.
Robert K. Roberts, Stormer Hill Bleachworks, Tottington, near Bury, established 1799.
Executors of S. Rothwell, Woodhill Bleachworks, Elton, near Bury.
G. & S. Slater, Dunscar, Bolton, established prior to 1800.
Simpson & Jackson, Street Bridge Bleachworks, Royton, Oldham, established 1761.
John Smith, jr., & Co., Great Lever Works, Bolton, established 1840.
John Stanning & Son, Limited, Leyland Bleachworks, Leyland, established prior to 1830.
Sykes & Co., Limited, Edgeley Bleachworks, Stockport, established 1871.
John Waterhouse & Co., Tootel Bridge Bleachworks, Breightment, Bolton, established 1793.
Samuel Walch, Outwood Bleachworks, near Prestwich, established 1850.
John Whitehouse, Elton Works, Bury, established prior to 1800.
John Whittaker & Co., Mount Sion Bleachworks, Radcliffe, established 1771.
Charles Whowell, Two Brooks Bleachworks, Tottington, established 1859.
John Young & Co., Crumpsall, Limited, Anchor Bleachworks, Hendham Vale, Manchester, established prior to 1800.

From the prospectus, I take the following paragraphs explanatory of the purposes of the trust:

The principal business of the company is the bleaching and finishing of cotton piece goods of every description.

The chief center of the cotton industry is Manchester, and all the works acquired by the company are situated within convenient distance of that city excepting those of four Scotch and two Irish firms, who are engaged in special branches of the bleaching business, and are regarded as desirable acquisitions for the company.

A few of the amalgamated firms are dyers as well as bleachers, and the two businesses may be usefully and profitably continued side by side. There is, however, no intention of competing with the Bradford Dyers' Association, Limited, and in the case of one firm, which carries on at one of its works piece dyeing of the Bradford class, the company have arranged to transfer the dye works to that association.

The bleaching trade is one of the oldest in Lancashire, and has proved itself a steady and prosperous one. It is also preeminently a safe trade. Bleachers are not buyers or sellers of the goods upon which they operate, their business being to bleach and finish goods for the merchants. It is practically free from ordinary trade risks; the profits are believed to have been exceptionally stable, and there is no record of any bleacher having suffered appreciable loss through bad debts incurred in the course of his legitimate trade.

The great and ever increasing difficulty of obtaining an adequate supply of water renders the position of the old established bleaching firms a very strong one, while enforcement of law against pollution of rivers tends still further to prevent the erection of new works.

For a great many years past, there have existed in the Manchester bleaching trade voluntary associations for the regulation of prices in branches of the business and for other purposes, and these have worked in harmony with the merchants as well as to the advantage of the trade; but it has been realized that the full advantages of cooperation can be secured only by amalgamation, for the success of which the organization and existence of these associations give exceptional facilities.

The present amalgamation has secured the adhesion of many firms who were not previously members of any price association.

It is believed the formation of this company will strengthen the cordial relations already existing with the Manchester merchants, for, being in possession of works of every description capable of dealing at appropriate prices with every branch of bleaching and finishing, the amalgamated firms will be enabled to satisfy the varying demands of the whole Manchester trade and meet any competition from abroad or elsewhere.

Individual effort will be maintained among the various amalgamated firms. So far as possible, the management of each works will be left in the hands of those who have been responsible for its conduct in the past, and the heads of each branch may under the articles of association be remunerated wholly or partially by a commission or percentage on the profits of the branch managed by them. Each firm will continue to deal personally with its own customers, and arrangements which have been made by individual firms with regard to special finishes for particular customers will be strictly adhered to.

The general management of the business of the company is vested in general managers. The first two managers will hold office for three years, and the remuneration attached to their posts is limited to a commission, payable to each of them, of 2½ per cent on the balance of the net profits made by the company during each year over and above the sum required to pay the debenture interest and preference dividend for that year.

The directors believe that the successful management of the undertaking and the cordial cooperation of all the amalgamated firms are secured by the appointment as first general managers of Mr. John Brennand and Mr. John Stanning.

The remuneration of the chairman, vice-chairman, and directors (other than the general managers) will be fixed by the share holders in general meeting.

As so many kinds of cottons are shipped to America from Manchester, this trust has an interest to us. In the year ending December 31, 1899, it sent to the United States, colors, dyestuffs, and chemicals to a total value of $125,592.76.

CEMENT TRUST.

Consul Halstead writes from Birmingham, under date of July 14, 1900:

British newspapers are to-day printing in their advertising columns the preliminary notice of the Associated Portland Cement Manufacturers, Limited, with a total capital of £8,000,000. This $40,000,000 cement "trust" attracts no attention, and its formation is not even commented upon by the newspapers. In a recent number of the Advance Sheets of Consular Reports,[1] Consul Worman, of Munich, announces that German manufacturers of cement are to hold a meeting for the formation of a syndicate, which will open a central bureau for the sale of all cement of German manufacture.

That these two cement trusts, one British and one German, have an importance to American cement users may be seen by the following figures of cement, Roman, Portland, etc., imported into the United States, published by the Treasury Department of the United States:

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[1] No. 766, June 27; Consular Reports No. 239, August, 1900.

Year ending December—	Quantity.	Value.	Of which was furnished by—					
			United Kingdom.		Belgium.		Germany.	
			Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Pounds.		*Pounds.*		*Pounds.*		*Pounds.*	
1897....	836,329,662	$2,688,122	137,737,439	$451,256	219,061,566	$649,675	443,711,842	$1,467,845
1898....	805,527,623	2,624,226	94,423,730	333,405	267,612,329	800,949	413,963,824	1,394,551
1899....	843,285,306	2,888,286	79,853,052	309,614	249,659,656	747,448	477,528,700	1,693,722

IRELAND.

BELFAST.

After careful investigation, I find that there are no trusts or trade combinations with head offices in this consular district. Attempts have been made upon different occasions to form such combinations to maintain prices among the manufacturing industries of this district, but the agreements have been broken and the efforts have been ineffective. In the greatest manufacturing industry in the province of Ulster, the flax-spinning and linen-weaving trades, many proposals to regulate and maintain prices have been made, but without success. The Linen Thread Company, Limited, was organized in 1898 for the purpose of controlling this industry. The head office is located at Glasgow, from which the general business of the syndicate is conducted, all of the firms engaged in this line of work in this district with the exception of one joining the combine. The result has been that prices are steadier, without material advancement, and the small firm that refused to enter the combination has been doing a much greater and more profitable business than before. Notwithstanding the fact that the manufacturers of this district seem to be averse to the formation of trusts, and rely on supply and demand and competition in the trades to fix prices of production, yet in many avenues of trade and commerce—especially in cases where dealers are dependent upon the manufacturers of England and Scotland for their supplies—the effect of trade combinations is felt. An illustration of the effects of such combinations is shown in the association of wall-paper manufacturers, with headquarters in London, embracing nearly all the manufacturers of paper hangings in the United Kingdom. It requires all dealers in wall paper to buy their stock from the combination, and in case of refusal they will not be supplied. The capital of this association is £6,000,000 ($29,199,000), and it has been in operation since September 30, 1899. The dealers in paper hangings in Belfast and other cities in the province of Ulster depend for their stocks upon the manufacturers in England, as there are but a few inferior concerns in this consular district, the output of which is totally inadequate to meet the demands of the trade, and dealers here have practically submitted. The prices of lower-grade goods have advanced from 5 to 15 per cent; on other grades they have remained substantially unchanged. The only appreciable effects of trusts here are slight advances on some productions and prevention of sudden fluctuation in prices.

WILLIAM W. TOUVELLE, *Consul.*

BELFAST, *June 8, 1900.*

CORK (QUEENSTOWN).

In response to the Department's circular of March 20 I have to report that there are no trusts or trade combinations in the south of Ireland. Three or four years ago, an attempt was made to form a trust by the linen manufacturers in Ireland, but it was unsuccessful and has not been renewed. Later, a similar attempt was made with regard to the manufacture of tobacco in Ireland, but it also failed.

DANIEL SWINEY, *Consul.*

CORK, *April 27, 1900.*

DUBLIN.

In this district, aside from the gas and street-railway companies, there is no trust or trade combination. For convenience, many of the large establishments are organized under the limited-liability act, but there is no attempt at monopolistic combination. It is rumored that the dealers in coal have an understanding as to prices, but there is great competition in the trade.

The result of the consolidation of the street railways has been favorable, the fares being lowered and the services improved. The same may be said of the consolidation of the gas companies, the price of gas having been reduced. Complaints are made concerning the quality of the gas sold and also of the plan of charging 24 cents a thousand feet more in the suburban districts than in the city, the prices in the city being 85 cents and in the suburbs $1.09 per thousand feet.

Some of the English trade combinations have agencies here, and the fertilizer manufacturers of the United Kingdom, having headquarters at Liverpool, have a combination controlling prices which also governs them here. The consumers complain that by this combination prices are unduly advanced, restricting consumption.

JOSHUA WILBOUR, *Consul.*

DUBLIN, *May 14, 1900.*

SCOTLAND.

EDINBURGH.

I submit the following list of trade combinations in the United Kingdom:

In February, 1891, the United Alkali Company, Limited, was formed, combining in one undertaking various chemical works in the United Kingdom, in which some or all of the following chemicals are manufactured, viz: Bleaching powder, soda ash, caustic soda, white alkali, sulphate of soda, crystals of soda, chlorate of potash, sulphuric acid, hydrochloric acid, sulphur, etc. Salt mines and works were also acquired. This company consolidated the works and businesses of forty-eight firms or companies. Offices, Liverpool.

In July, 1896, J. & P. Coats, Limited, thread manufacturers, a company organized several years before, acquired the dominant interest in the businesses of Messrs. Clark & Co., Messrs. Jonas Brooks & Bros., and Messrs. James Chadwick & Bro., Limited, and the capital was increased from £3,750,000 ($18,249,375) to £5,500,000 ($26,765,750). Offices, Paisley.

The English Sewing Cotton Company, Limited, was formed in November, 1897, uniting the principal English firms and companies engaged in the manufacture of sewing, crochet, knitting, mending, and other cottons, including in some cases the allied businesses of cotton spinning, doubling, twisting, dyeing, bleaching, polishing, bobbin making, etc. Fifteen companies were amalgamated. Capital, £2,750,000 ($13,382,875). Offices, Manchester.

The Fine Cotton Spinners and Doublers, Limited, was formed in May, 1898, consolidating thirty-one businesses and having a capital of £6,000,000 ($29,199,000).

The American Thread Company, Limited, organized in December, 1898, united thirteen businesses. Capital, £3,720,000 ($18,103,380).

The Bradford Dyers' Association, Limited, was formed in December, 1898, for the purpose of acquiring the businesses of the various companies and firms engaged in the piece-dyeing trade. Twenty-two businesses were thus amalgamated, comprising about 90 per cent of the Bradford piece-dyeing trade.

In July, 1899, The Yorkshire Indigo, Scarlet, and Color Dyers, Limited, was formed for the purpose of acquiring and carrying on the works of several firms and companies engaged in the Yorkshire indigo, scarlet, and color dyeing trade. Eleven businesses were consolidated. Capital, £600,000 ($2,919,000). Offices, Huddersfield.

In July, 1899, The Bradford Coal Merchants and Consumers, Limited, was formed, uniting eight businesses. Capital, £250,000 ($1,216,625).

The Yorkshire Wool Combers' Association, Limited, was organized in October, 1899, acquiring and amalgamating into one concern the wool-combing businesses of thirty-eight companies and firms. Capital, £2,500,000 ($12,166,250). Offices, Bradford.

The British Oil and Cake Mills, Limited, formed in July, 1899, amalgamated seventeen companies and firms engaged in oil and cake manufacture and oil refining. Capital, £1,500,000 ($7,299,750). Offices, London.

Barry, Ostlere & Shepherd, Limited, incorporated in October, 1899, consolidated the businesses of five companies having eight works engaged in the manufacture of floor cloth and linoleum. Capital, £4,000,000 ($19,466,000). Offices, Kirkcaldy.

The United Indigo and Chemical Company, Limited, formed in November, 1899, consolidated eight companies. Capital, £250,000 ($1,216,625). Offices, Manchester.

The Calico Printers' Association, Limited, formed in December, 1899, amalgamated sixty businesses valued at £8,047,031. Capital, £9,200,000 ($44,771,800). Offices, Manchester.

The Wall Paper Manufacturers, Limited, incorporated in February, 1900, united thirty-one firms and companies engaged in the manufacture of wall papers and raised decorative materials. Capital, £4,200,000 ($20,439,300). Offices, Darwen, England.

The United Velvet Cutters' Association, Limited, formed in March, 1900, consolidated four businesses, the principal ones engaged in this branch of trade in England. Capital, £300,000 ($1,459,950). Offices, Manchester.

The British Cotton and Wool Dyers' Association, Limited, incorporated in April, 1900, united forty-six businesses. Capital, £2,750,000 ($13,382,875).

In The Yorkshire Soap Makers' Association, Limited, formed last April, were amalgamated twelve firms and companies engaged in the soap making, oil, and packing, cotton-waste manufacturing, and other kindred trades. Capital, £400,000 ($1,946,600). Offices, Bradford.

I send under separate cover a copy of the prospectus of each of these combinations:[1]

The United Alkali Company, Limited; The English Sewing Cotton Company, Limited; The Yorkshire Indigo, Scarlet and Color Dyers, Limited; The Yorkshire Wool Combers' Association, Limited; The British Oil and Cake Mills, Limited; Barry, Ostlere and Shepherd, Limited; United Indigo and Chemical Company, Limited; The Calico Printers' Association, Limited; The Wall Paper Manufacturers, Limited; The United Velvet Cutters' Association, Limited; The Yorkshire Soap Makers' Association, Limited; and The Bradford Dyers' Association, Limited.

A rumor has been current that there is a movement among the tweed manufacturers of the south of Scotland to amalgamate, but those manufacturers who have been approached on the subject say that the story is an invention.

As to the effect of the combinations in various trades upon production, wages, and prices, the opinions of well-informed men differ. It would seem that, generally speaking, the effect has been most marked in preventing a rise in wages.

Wall paper has advanced about 10 per cent since March last. In the same period, ordinary sewing cottons have risen 15 per cent, and ordinary linen sewing thread from 10 to 15 per cent. The cheaper qualities of floor cloth are 2 per cent higher than the average prices in September, 1899, and the better qualities have risen 4 per cent since January 1, 1900.

RUFUS FLEMING, *Consul.*

EDINBURGH, *May 10, 1900.*

DUNDEE.

Consul Higgins writes from Dundee, May 18, 1900, that there are no trusts or trade combinations located in his district.

DUNFERMLINE.

Combinations for manufacturing or commercial purposes are not spoken of as trusts in this country, but are known as amalgamations. The tendency of individual industries to amalgamate is increasing, the free-trade policy of the country in no wise discouraging or affecting the prosperity of amalgamated companies. The largest linoleum combination in Scotland (perhaps the largest in the world) was organized last year at Kirkcaldy and included the La Compagnie Rouennaise de Linoleum at Le Houline, France, as mentioned in my report on commerce and industries, October 25, 1899.[1] The amalgamated company was organized on the adoption of the following proposition, as reported in a newspaper account of the first general meeting of the company:

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[1] Filed for reference in Bureau of Foreign Commerce.

It is proposed that the amalgamated company should take the name of "Barry, Ostlere & Shepherd, Limited," and that the company should have a nominal capital of £1,000,000 ($4,866,500), divided into—

35,000 preference shares of £10 each, bearing a cumulative dividend of 6 per cent	£350,000 =	$1,703,275
And 650,000 ordinary shares of £1 each	650,000 =	3,163,225
	1,000,000 =	4,866,500

But it is intended that of the above preference share capital there shall in the meantime be issued only £250,000 ($1,216,625), whereof there will be allotted to the preference shareholders of—

John Barry, Ostlere & Co. Limited	£125,000 =	$608,313
The Kirkcaldy Linoleum Company, Limited	50,000 =	243,325
And there will be issued to the public	75,000 =	364,987
	250,000 =	1,216,625

And of the above ordinary share capital, it is proposed that there shall in the meantime be issued only £588,000 ($2,861,502), distributable as follows:

To the ordinary shareholders of John Barry, Ostlere & Co., Limited	£270,000 =	$1,313,955
To Mr. Barry in commutation of his share of profits	55,000 =	267,658
To Mr. Ostlere in commutation of his share of profits	55,000 =	267,658
To holders of ordinary shares in the Rouen Company (1 share for every 25 francs of their holding)	43,000 =	209,260
To Mr. Barry for his "apport" shares in that company	5,000 =	24,333
To Mr. Ostlere for his "apport" shares in that company	5,000 =	24,333
To the ordinary shareholders of the Kirkcaldy Linoleum Company, Limited	77,500 =	377,154
To the ordinary shareholders of the Kirkcaldy Linoleum Company for payment in cash	12,500 =	60,830
To Mr. Shepherd in commutation of his share of profits	18,000 =	87,596
To the partners of Messrs. Shepherd & Beveridge	47,000 =	228,726
	588,000 =	2,861,502

It is further proposed that the amalgamated company shall have a mortgage debenture stock secured over its heritable property and fixed plant in Scotland, and bearing 4 per cent interest, of	150,009 =	729,975
From which there will be paid off the mortgage debenture debt of John Barry, Ostlere & Co., Limited, amounting to	75,000 =	364,987
Leaving a balance for issue when required of	75,000 =	364,987
The £75,000 ($364,987) of preference share capital to be issued to the public is proposed to be issued at a premium of £3 6s. 8d. per share (yielding to the investor 4½ per cent), which will produce	£100,000 =	$486,650
The 12,500 ordinary shares of the amalgamated company to be allotted to the ordinary shareholders of the Kirkcaldy Linoleum Company, Limited, for cash will produce	12,500 =	60,830
The amalgamated company, at its commencement, will thus be provided (in addition to the resources of the concerns taken over) with immediately payable funds, amounting to	112,500 =	547,481

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[1] Commercial Relations, 1899. Vol. II, p. 925.

This means that out of the combine, £10 preference shares of a total value of £75,000 ($364,987) are to be issued to the public. It is intended that these shares should be issued at a premium of £3 6s. 8d. ($16.22) per share, so that the yield is reduced to 4¼ per cent per annum. All the concerns proposed to be amalgamated can present records of uninterrupted progress, and even at 4¼ per cent there can be little doubt that there will be a rush for shares.

The British Cotton and Wool Dyers' Association, organized April 11, 1900, with a capital of £2,750,000 ($13,382,875) is an amalgamation of forty-six cotton and wool dying concerns in England and Scotland.

This represents about 80 per cent of the trade in Britain, and undoubtedly will enable the association to control prices and prevent the cutting of rates. Among the enterprises included in the combination are the dye works of D. Brown & Co., Westfield, Dunfermline. The directors have been chosen from the respective firms amalgamated.

Each firm, as far as practicable, is continued under the control of its past management. From one of the directors, I understand that it would have been business suicide for any firm to have refused to join the combination.

The office of the association is now at Manchester, England, but it is to be located at Bradford, and in this connection I may add that it is the opinion of some who are in a position to know, that the Bradford Dyers' Association and the British Cotton and Wool Dyers' Association will eventually unite and monopolize the industry in Great Britain.

I inclose prospectus of the British Cotton and Wool Dyers' Association, Limited.[1]

Public sentiment is quite indifferent regarding amalgamations here, and no adverse criticisms appear in the press.

J. N. McCunn, *Consul*.

Dunfermline, *May 30, 1900*.

GLASGOW.

Under the law of Scotland, which is also the law of the United Kingdom, a corporation may be formed for the purpose of carrying on any business, by seven persons subscribing a memorandum of association. The memorandum states the object for which the company is to be formed, the amount of capital with which it is to start business, and the number of shares into which the capital is divided, and whether any number of shares are to be preferred over the others as to dividend or as to payment of capital in the event of winding up; also the name of the proposed company and the situation of its registered office. The subscribers of the memorandum of association may only have one share each. This memorandum of association is usually accompanied by articles of association, which are by-laws for regulating the business of the company, the appointment of directors, votes of shareholders, etc. These documents are sent to the registrar of joint-stock companies, who is a Government official, and on being registered by him, a certificate of incorporation is issued to the company. The company is then incorporated and entitled to commence business. Hitherto, there has been no regulation as to what proportion of the nominal capital must be subscribed before commencing business, but there is a bill at present before the legislature, and which it is intended will become law immediately, making it imperative that a certain proportion of the nominal capital must be subscribed before any business is done. The liability of shareholders is limited to the amount, if any, unpaid on the shares held by them. A list of shareholders, with the number of shares held by them and the amount paid, and a balance sheet showing the position of the company, must be lodged with the registrar annually. Any person, whether a creditor or not, can, on payment of a small fee, get from the registrar full information as to the positions of any registered company.

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[1] Filed for reference in Bureau of Foreign Commerce.

So far as trust combinations are concerned, there are no statutory enactments either prohibiting or regulating them. Such combinations are formed under the provisions appertaining to all corporations. It is worthy in passing, however, to mention that little or no attention is given to these combinations, when formed, in the public prints. They excite no comment whatever. It is for that reason very difficult to obtain information of their workings and influence. In this report, I have endeavored to give such details as I can obtain of the principal trusts or combinations which have their habitation in Scotland. The list may possibly not be complete, though in the main I think it will be found to include about all worth mentioning.

I have said above that little or no discussion of trusts is found here in the public prints. Very recently, a member of the Glasgow Chamber of Commerce gave notice in that body that at the next meeting he would move to discuss the subject of trusts or combinations, and to ask the chamber to record its opinion that such combinations are "highly prejudicial to the commercial interests of this country and unjust to others engaged in similar trades or manufactures, creating as they do virtual monopolies." It was further proposed by this member that the directors of the chamber should advise the chamber to petition the Government to take "such steps as seem to them right" to prevent the formation of these combinations and to recommend other chambers to take similar actions.

Speaking of this movement on the part of the Chamber of Commerce, the "Glasgow Herald" says:

> It has been objected that this is not a matter of practical politics, and should not, therefore, be debated by the chamber at all. But it is a matter of large social and economic importance that will sooner or later be projected into the ordinary political arena. If the system of business combinations known in America as "trusts" has not in this country, or in Europe, either attained the dimensions or developed the evil qualities to be found in the United States, it is by no means a novelty in the Old World. It is, moreover, a perfectly natural evolution of commercial enterprise, whether it is to be commended or not. Nor is there anything new in the antipathy to such combinations and the desire to prevent them by force of law, for there existed on our statute books a hundred years ago, or more, a number of ordinances imposing penalties on combinations to fix the prices or secure the monopoly in several branches of industry. There is a material practical difference, no doubt, between trusts as we hear of them in America and combines as we know them in Europe. The big American trusts are formed on such a scale as to carry out the definite object of controlling all the influences that can affect the interests of the copartners, including railway and other corporations and local, State, and Federal governing bodies. For the most part, the combines in Great Britain and on the Continent are of comparatively modest dimensions, and are, or are alleged to be, formed to prevent excessive underselling, injurious to the producers and not greatly beneficial to the consumers. In both cases the ultimate aim is, of course, profit, and profit

is the legitimate aim of all commerce. It becomes illegitimate only when gained at the expense of the commonwealth. If, for instance, trusts or combines operate in restraint of trade, they are injurious to the commonwealth. And it is just here that economic opinion varies. To the American trusts the balance of opinion is adverse. As to the European combines, opinion is pretty much divided. Curiously enough, Germany has both more numerous and larger industrial organizations than any other country on this side of the Atlantic. It is stated that there are upward of two hundred trusts in Germany, but probably only a very few of them at all approximate to American ideas. For the majority of them it is claimed that by checking overproduction and preventing underbidding, they have proved a blessing to the trades concerned, without at all affecting the public welfare. And here it may be at once admitted that, while it is for the public welfare to have commodities cheap, it is not for the public welfare that producers should be ruined and industries destroyed in the pursuit of cheapness. Perhaps the German combination best known to Britain is the Rhenish-Westphalian Coal Syndicate, which controls the bulk of the German coal industry and practically regulates prices. It is by no means clear that the public welfare has not suffered at the hands of this combination. And it would be unwise to conclude that this and similar combinations in Germany are popular, or at all events are not regarded with popular disfavor, merely because they have not been denounced by any portion of the people as fiercely as the trusts are denounced in America. The circumstances of the two countries are so very different.

Perhaps one reason why the German trusts have not created a political crisis is that they have hitherto exercised their powers with moderation, and have not attempted to manipulate prices so as to give cause for legal interference. And the same may be said of the combines and unions that have been formed in this country of recent years. Thread has not been made dearer by the great organization of thread producers, though, of course, it may be said that it might have been cheaper had production remained free and open. It is probable that coal would have been no dearer than it is now had the late Sir George Elliot been able to carry out his scheme of a great coal combine. But there are other considerations besides the influence of such organizations upon price. There is, for instance, the distribution of productive industry. Under the trust system, the plan followed is to concentrate production for economy, and to close up the least profitable factories. One has only to study the history of the Alkali union to see how, by this method, an industry may be cleared out of several districts altogether, to the obvious disadvantage of the workers and traders in these districts. It has been sometimes said by American writers that it is the free-trade principles of Britons that lead them to comment so severely on the trust system, but free trade has not prevented the development of a form of the system here—a development which has presented some very striking examples within quite recent months. The very essence of all these combines is monopoly. Now monopoly is an ugly word, but it is not necessarily a bad thing. Monopoly in practical economics is not absolute absorption by individuals or associations of individuals. It is, rather, the antithesis of competition. An American economist has, not unhappily, provided a definition of modern monopoly as substantial unity of action on the part of persons engaged in some particular kind of business which gives practical control over prices. That control, of course, is obtained by concentration and economization in production and distribution. And one of the greatest powers the monopolists under the trust and combine systems possess is that of underbidding. They can stave off competitors by underselling, but this very power induces the prudential policy of staving off competition by keeping prices at a moderate level. When all is said and done, however, one is constrained to perceive that trusts and combines have not abolished overproduction or prevented industrial crises. And, with whatever good features they may be accredited, we must remember that, if impelled by greed and unscrupulousness, such organizations must in time involve very serious dangers to the commonwealth. Is it safe to trust human nature with the opportunity and the means to wax fat and kick at the expense of the community?

The impression that seems to exist here that, somehow or other, these "combinations" in Great Britain differ in some of their essentials, aims, objects, and workings from trusts in America, is erroneous. If there be any difference it is merely in degree rather than in kind. Trusts in this country have thus far met with no opposition either in legislation or public opinion. Consequently, they have not been called upon in self-defense to exercise those more disagreeable qualities which are attributed to them by aggressive enemies. The question of trusts has never figured in politics (few commercial, economic, or financial questions do in this country), hence no accusations of official favoritism to gain political advantage are made. However, one has but to go through the country and note the tall chimney stacks standing here and there, idle and alone, from which the rest of the works have been moved or razed, to understand that the combination has reduced output or confined operations to narrower limits; and these smokeless chimneys are but mute witnesses to the fact that a once flourishing enterprise has been throttled.

THE COATS' COTTON-THREAD COMBINATION.

Although its interests extend over the greater part of the world, the great cotton-thread combination known as Coats, Limited, is essentially a Scottish concern, and had its birth in Paisley, 7 miles from Glasgow, in 1830. At the present time, however, the concern is the outcome of a huge combination by the following firms, scattered over both Scotland and England, as follows: J. & P. Coats, Paisley; Clark & Co., Paisley; Jonas Brook & Brothers, England; James Chadwick & Brothers, England, and a few other smaller companies.

When the syndicate was formed in 1890 the first issue of shares was $18,225,000, at $50 each (stock); $1,114,358 cumulative preference, at $50, bearing interest at 6 per cent, and $9,720,000, $500, four and a half per cent debenture stock issued as perpetual, but the company reserving the option to pay off after January 1, 1901, at 110 per cent. The highest dividend paid on the ordinary was 60 per cent for a half year, and the lowest 30 per cent for four months. The present price of the ordinary is 75⅝; the cumulative preference, 17¼, and the debenture, 110½. January 1 to May 31 last, however, the first-named stock was quoted highest, at 77⅛, lowest, 69¼; the second at 17½ highest, and 16½ lowest, and the third at 112½ highest, and 109⅞ lowest.

Paisley was famed long ago for its production of shawls, and "for a great many years" (says an exhibition number of the Glasgow Mail of 1888) "no bride's outfit was considered complete in Scotland which did not include one specimen, at least, of the Paisley weavers' art." After this, however, the Paisley shawl, no doubt owing to the caprice of fashion, went out of use, and the ancient burgh was left in a bad way for another staple industry. "Like the fair Helen of Troy, a lady came to the rescue," said my informant, "and made commercial history." A daughter of Mr. John Shaw, of Burgarran, near Paisley, had acquired great skill in spinning fine linen yarn, and with the aid of some primitive doubling frames she was soon able to put a quality of thread into the market which came to be in demand. A Mr. Pollock entered into the manufacture, and he was soon followed by the founders of the two great firms, Coats and Clark, in 1830. By and by, impetus was given to the manufacture of cotton sewing thread by the introduction of the sewing machine, patented in America, and since then other firms have arisen in the thread line to compete with Messrs. Coats and Clark; and, to make a long story short, a combination was agreed upon, and named the "Central agency." The Messrs. Coats, in their prospectus, gave their profits for seven years at $14,495,172, and the stock in trade, consisting of wholly and partly manufactured stock and raw material, etc., upward of $4,665,000. The land covered by the works at Paisley and Pawtucket, incorporated under the laws of the State of Rhode Island, comprises upward of 120 acres, and over 6,000 hands are employed. The company also has mills in Russia and Canada, and in carrying out the subsequent arrangement with the Clark, Brook, and Chadwick companies, including good will and shares acquired in Clark, Brook, and Chadwick, and amount advanced in way of permanent loans to these companies, $17,318,128 was expended. Female labor is almost exclusively employed, and the women, all on piecework, make from $2.16 to $4.32 per week.

EDINBURGH UNITED BREWERIES.

During the last few years, a great impetus has been given to beer brewing in Scotland, and quite a number of new breweries have been erected all over the country, but more particularly in Edinburgh. Over fifty years ago two companies did the bulk of this class of industry in Scotland, viz, Messrs. Tennent, Wellpark, Glasgow, who exported their liquor all over the world, and Messrs. William McEwan & Co., Edinburgh. Now, however, there are at least 100 breweries scattered all over the country, and it was quite a recent idea to form anything like a brewery combination. This was brought about in 1889, when the Edinburgh United Breweries' Company, Limited, was registered in Edinburgh to acquire the works, plant, patents, water rights, etc., of Messrs. R. Disher & Co., G. Ritchie & Son, Robin, Macmillan & Co., and D. Nicolson & Co., firms that were doing a fair and lucrative business. The authorized capital was $1,195,000, halved in $50 ordinary and $50 cumulative preference shares, bearing interest at 6 per cent, with power to issue $1,000,000 of debenture stock. The directors of the concern, elected at its inception, were Messrs. A. Alexander, H. A. Higginbotham, Robert Robin, D. Stewart, W. Stewart (managing director), and W. Smith (secretary). The company paid 6 per cent last year as a dividend on both ordinary and preference shares, but it has paid as high as 8 per cent. The present prices of the shares are 8¾ for the ordinary and 12¼ for preference, with the debenture stock standing at 106.

THE UNITED COLLIERIES, LIMITED.

This combination, which has its headquarters in Glasgow, was formed in 1898, and at its inception took over the following companies: The Belhaven Estate Collieries; The Bredisholm Collieries, Limited; Dunn & Glen, Limited; Hillhouserigg Coal Company, Limited; Larkhall & Fairholm Collieries, Limited; The Newhouse Collieries, Limited; The Sitehill Collieries, Limited; Peter Thornton, and Gavin Whitelaw.

The present directors are: Lord Belhaven and Stenton, chairman; James T. Tullis, J. P. and D. L., Glasgow; Hugh Crichson, Airdrie; Arthur Logan, Paisley; J. F. Baird, Paisley; George L. Watson, managing director.

From the second annual report by these gentlemen, submitted May 8, 1900, it appears that the gross profits for the year amounted to $284,434, and after debiting to revenue the cost of management, etc., there remained a balance at the credit of profit and loss account $212,273, to which falls to be added balance brought forward from last year, $11,273, making a total of $223,546, which the directors recommend should be treated as follows: That $50,000 be written off for depreciation; $50,000 placed to reserve fund, and that a dividend at the rate of

5 per cent per annum (less income tax) be paid on the preference shares, absorbing $21,486, and a dividend at the rate of 20 per cent per annum (less income tax) be paid on the ordinary shares, which absorbs $93,958, leaving a balance of $10,720 to be carried forward to next year.

The share capital of the company is $1,000,000 and is equally divided, $500,000 being ordinary at $5 each, and $500,000 preference 5 per cent of $5 each.

The assets of the company include mineral leases, pits, brickworks, plant, buildings, workmen's houses, railways, wagons, etc., of a dozen collieries, viz, Bredisholm, Ellismuir, Belhaven, Clydesdale, Wellshot, Larkhall, Fairholm, Newhouse, Sitehill, Crofthead, Fallahill, and Hillhouserigg.

The approximate price of the ordinary shares has reached as high as $6.90, and the lowest $5.40, while the preference were quoted as high as $4.44 and the lowest $3.60 this year. In connection with this trust and the rapid development of coal fields in Scotland, it may be mentioned that the engineer reports that recent workings showed an area of coal not included in his former estimate, which, together with new areas obtainable on lease, would yield an additional quantity of 4,628,000 tons of coal and dross. The assets of the company are set down at $1,473,080.

YOUNG'S PARAFFIN OIL COMPANY.

This Scottish oil company, started in 1851, has, so to speak, revolutionized the mineral oil trade of the United Kingdom, and even yet is a formidable rival to the great wells of the United States and Russia. The founder of the firm, Mr. James Young, and Dr. Lyon Playfair, the accomplished mineralogist, and at one time member of Parliament for the Edinburgh and Aberdeen universities, seem to have had a serious consultation about the properties of shale, paraffin, and other mineral oils, and the outcome was the starting of a large work at Bathgate for the manufacture of paraffin oil and paraffin from bituminous coal. On the expiry of James Young's patent, however, in 1864, numerous works of the kind on a smaller scale sprung up in Scotland, and some of them, including the Broxburn Company, did a good deal of active work. The American petroleum wells were gradually coming to the front from 1860, and, eventually assuming colossal proportions, forced down the prices of burning oil in Europe from 84 cents per gallon to the plebian 12 cents. By dint of economy in the process of manufacture, increased yields, and special saving in details, the company was able to hold its own against their American and Russian rivals, and up to the present time, with some vicissitudes, continues to work hard. The use of mineral oil very rapidly came to the front, and the quantity now consumed yearly in the United Kingdom is enormous. Fierce competition, however, has reduced the company's profits very materially, but financial experts think that by and by matters will come all right. Its capital is $500,000 in $20 shares, on which no dividend has been paid for some time. The approximate price of the shares at present is set down at $13.56 in 1900. January to June, the highest quotation in the market was $13.92 and the lowest $8.92. In 1899, the best quotation was $11.52 and the lowest $4.56. It may be mentioned that the Broxburn, Limited, with a capital of $100,000 ordinary shares of $50 each, and $50,000 of 6 per cent cumulative preference, stands to-day at $4.50 as the highest and $3.78 as the lowest for ordinary, and $3.24 highest and $2.74 as the lowest for the cumulative preference.

NOBEL DYNAMITE EXCHANGE COMPANY, LIMITED.

This company was formed in Glasgow in 1877, took over the property of the British Dynamite Company, and has formed a strong explosives combination. The authorized capital is $1,866,270, in $50 shares. Of these, $1,166,400 4 per cent first-mortgage debentures were issued in 1896. Mr. Thomas Reid, of Kilmerdinnie, was chairman, and the directors included Sir Charles Tennant, Bart., of St. Rollox Chemical Works, Glasgow; Mr. Leonard Gow, of the Glen line of steamships, owned in Glasgow and London, and other Glasgow men. At the start it issued 228,540 share warrants at $50 a share, and the approximate price of these warrants in March last was $3.87. The highest price this year was $4.11 and the lowest $3.72. For a number of years dynamite has been gradually expanding in price, and as there was virtually no combination among the manufacturers each one was fighting single handed, and prices, of course, got somewhat mixed. Since then, however, the combination has had its effect on the markets and the company prospers. The present yield per cent of the shares is $34 and the present price of debenture stock 101½.

There is a second combination in Nobel's name, registered in London in 1886, designated Nobel's Dynamite Trust Company, of which the deceased, Mr. Thomas Reid, was chairman, but the most of the other directors are Englishmen. In its formation the object was to acquire by exchange shares in all explosive companies. The authorized capital was the big one of $15,000,000 in $50 shares, and in April last the dividend paid was 12 per cent. The latest price of these shares quoted was $3.87. It is stated in Glasgow that at no distant date all the explosive companies in Britain are about to unite into one large syndicate. About twenty-four years ago a company was formed at Ardeer, in Ayrshire, where plant, chemical appliances, and other things used in the manufacture of dynamite were laid down, including the construction of a wharf for the safe shipment of the explosive; and there are others in several parts of Scotland.

THE UNITED ALKALI COMBINATION.

The art of chemistry has made immense strides in Glasgow and district during the past 100 years, and the most powerful companies formed from time to time to prepare dyeing stuffs, and chemicals of all kinds used in the manufacture of numerous articles of commerce, recently formed a strong syndicate. The chief firm to take the lead was the old-established one of Messrs. Charles Tennant & Company, St. Rollox Works, Glasgow, which may be said to be the admitted chief of the combination, formed in 1890. Although registered in Liverpool,[1] the head of the trust is Sir Charles Tennant, Bart., of St. Rollox, who is president, with Sir D. Gamble, Bart., vice-president; and Messrs. H. Gaskell and J. K. Huntley, managing directors; J. Brock, chairman; J. C. Stevenson, vice-chairman; C. E. Barlow, J. E.

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[1] See Liverpool reports for details as to capital, shares, etc.

Davidson, J. C. Gamble, W. Gamble, H. Gaskell, jr., Lieutenant-Colonel Gaskell, D. McKechnie, E. K. Muspratt, G. Pilkington, J. A. E. Raynor, R. Shaw, J. Tennant, P. J. Worsley, and E. Cary (secretary).

As to the history of the manufacture of chemicals in Glasgow and district, attempts were made as early as 1768 to prepare alum from the shale at Hurlet, near Paisley, but there was very little practical results till 1797, when a work was started by Messrs. Macintosh, Knox & Co. The making of alum at Hurlet and Campsie by Messrs. King was largely used in the manufacture of paper and various arts, and the company also produced what was then known as prussiate of potash and cyanide of potassium. Other compounds are also prepared from it. About the dawn of the present century, Mr. Tennant obtained a patent for the use of lime and other calcareous substances, instead of alkalies, to absorb the chlorine gas used in bleaching, and by and by works were in operation fòr the making of this chloride of lime at Pollockshaws. The works of St. Rollox, however, were first established under the name of Tennant, Knox & Co. in 1812, and eventually changed to Charles Tennant & Co. Since this time, numerous works for producing every conceivable form of dyestuffs, vitriol, bichromate of potash, soda, ammonia, various properties of alkali, etc., have arisen round about the district, including those of Messrs. John & James White, the Tharsis Sulphur and Copper Company, Townsend & Co., and others. The ore consumed at the Tharsis Sulphur and Copper Company is brought from Spain to the city in specially constructed Clyde boats, and is known as copper pyrites.

ACADIA SUGAR REFINING COMPANY.

This company was formed in Glasgow, in June, 1893, to acquire properties in Nova Scotia and New Brunswick, Canada, and the capital authorized was $3,000,000 in $5 shares, and $2,500,000 have been subscribed and paid up, half in 6 per cent cumulative preference and half in ordinary shares. There are also first mortgage 6 per cent debentures for $500,000, with interest payable in February and August, issued on the concern. With the present bounty system in France and other countries, it is a difficult matter for the sugar industries in Scotland, and, indeed, anywhere in Britain, to compete with State aided rivals. Greenock, a couple of decades ago, used tó be famed for its sugar houses and well-to-do merchants who traded in important articles of domestic consumption, but such days are now relegated to the past, and several of the refineries are now turned into stores and receiving premises for quite different articles of commerce, including a bone mill. The directors are Mr. T. E. Kenny, chairman; the Hon. R. Boak, P. O'Mullin, W. Smith, and J. F. Stairs, all of Nova Scotia; Mr. W. F. Humphrey, residing in Monkton, N. B., and Mr. A. G. Brand, A. A. Ferguson, and W. D. Gillies, Glasgow, and Mr. D. Brand, Glasgow, secretary.

The company's report for the year ending September 30, 1899, states that including $3,933.24, the balance brought forward from last year, the net profit for the year was $118,561.35, from which $5,080.09 has been applied to new plant at Woodside and Richmond refineries, and $15,000 has been set aside for depreciation, leaving a balance of $98,498.26. On August 1, an interim dividend of 3 per cent on the preference shares, $40,880, was paid, and the directors recommend to the shareholders that a further dividend of 4 per cent on the preference shares be paid on December 20, amounting to $54,506.67, and to carry forward the balance, $3,091.59. In reference to sugar concerns, it is worth while noting that the shipment of beet sugar into Great Britain in 1897 amounted to 1,000,000 tons, and during that period from Belgium alone 96,000 tons. In 1899 the price of the ordinary shares in the Acadia touched as low as 48 cents, with the 6 per cent cumulative preference at $2.64, while this year the preference best quotation is $2.90.

THE DISTILLERS' COMPANY, LIMITED, EDINBURGH.

Scotland is famed for the distilling of good whisky. Long ago the distillers were a very unassuming class of men, and considered the public used them very badly in preferring continental brandy to the real genuine "barley bree," so well and eloquently praised by the national poet, Burns. By and by, however, the brandy was relegated to second position, and whisky, at least the purest and best of it, holds first place, not only in Scotland, but in England and the colonies as well. The various blends, all known now by their distinctive names, are so numerous that a full blue book could not adequately describe them, and in order to keep up prices and make the individual distilleries responsible for their products, what is known as a whisky combination was formed in 1876, called the Distillers' Company, Limited. It was a big concern and included no fewer than ten distilleries. While the bulk of these were, of course, Scottish concerns—eight, in fact—Dublin and London chimed in and contributed two. The following, however, are the distilleries represented: Port Dundas, Glasgow; Caledonian, Edinburgh; Carsebridge, Alloa; Cameron Bridge, Fifeshire; Kirkliston, Edinburgh; Glenochil, Clackmannanshire; Cambus, Clackmannanshire; Knockdhu, Banffshire; Phoenix Park, Dublin, and Tooley street, London.

That the trust is a very prosperous one may be indicated by the last annual report, of which I give a brief summary. The capital of the concern is 88,768 $50 ordinary shares, fully paid up; $2,000,000 debenture stock, bearing interest at 4½ per cent, redeemable in 1907 at 110, and $400,000 of terminable debentures. The assets are set down as follows: By land and buildings, $1,960,321; plant and utensils, $1,038,387; sundry debtors, $1,329,105; cash on hand and in bank, $209,000; stock of spirits, grain, etc., $2,000,000; bills receivable on hand, $1,100,000; registered office accounts, including sundry debitors' and other assets, $120,000, and cash on hand, in bank, and on deposit, $719,418. After providing for the upkeep of the works and paying the full year's interest on the mortgage debenture stock and terminable debentures, the profit and loss account shows a profit for the year of $654,399, which, with $75,258 from last account, makes an available sum at credit of the account of $729,656. Out of this, the directors have set aside $250,000 and added it to the depreciation and reserve fund, while they have again taken $150,000 from the latter fund toward writing down the cost account of the works. After deducting these sums, there is left a balance at the credit of profit and loss account $490,000, which the directors recommend should be disposed of in paying a dividend of $2.88 per share, less income tax, on August 1, which payment taken in conjunction with the interim dividend of

$1.92 per share paid on February 1, makes the usual one of 10 per cent for the year and carrying forward $70,000. The approximate price of the ordinary shares is 20, but last year they touched 23½, and the lowest 19⅝, while debenture stock was approximated at 112—114¼ in 1899, and as low as 111⅞ in the same year.

BRITISH DYEWOOD AND CHEMICAL COMPANY, LIMITED.

The above company was promoted in Glasgow in May, 1898, with a capital of $2,770,000, divided into 35,000 5 per cent cumulative preference shares of $50 each, and 22,000 ordinary shares of $50 each. It was formed for the purpose of effecting an amalgamation of the following well-known firms, carrying on business as importers of dyewood and tanning materials, manufacturers of dyewood and tanning extracts, and general drysalters: Messrs. E. D. Milnes & Bros., Bury and Manchester; Messrs. Wm. R. Scott & Co., Parkhead, Glasgow; Messrs. John Dawson & Co., Alloa and Glasgow, and Messrs. Mucklow & Co., Bury and Glasgow.

The promoters stated in their prospectus that these combined firms would, it was expected, be able largely to reduce competition and effect many important economies in their purchases as well as in the production and distribution of their goods, and also be in a better position to meet the requirements of an increase of business in foreign markets. Mr. Walter Mucklow is chairman of the company, and the directorate was made up of one member of the above-mentioned firms. A valuation of the four firms' profits for the year 1897 amounted to $211,584, and the capital of the concern was made up as follows: Lands, buildings, and water rights, $657,562; machinery, plant, etc., $424,375; stock in trade, $619,168; book debts, $407,372, and trade-marks and good will, $680,710. The latest price of preference shares is $7\frac{13}{16}$. To June 30, 1899, 2 per cent per annum was paid on the ordinary shares.

FINE COTTON SPINNERS' AND DOUBLERS' ASSOCIATION, LIMITED.

Although this big trust was formed in Manchester,[1] the various firms in the syndicate do a large business with agents throughout Scotland. The companies taken into the concern are: Messrs. Bazley Bros., Manchester; Messrs. Bellhouse, James & Wamwright, Manchester; Messrs. Bennett & Co., Manchester; Messrs. Bouth & Co., Lancaster; Messrs. Bradley, Nottingham; J. H. Brown, Manchester; Messrs. Brown & Fallows, Bolton; Messrs. John Cosh & Sons, Nottingham; H. Christie, Yorkshire; Messrs. J. Froggatt & Co., Nottingham; Grosey Bank Doubling Company, Stockport; Messrs. W. Holland & Sons, Manchester; Messrs. T. Houldsworth & Co., Manchester and Reddish; Jackson Street Spinning Company, Manchester; John Knott & Sons, Ashton-under-Tyne; H. W. Lee & Co., Salford; R. Marsland & Co., Manchester; McConnell & Co., Manchester; S. Moorhouse, Stockport; A. & G. Murray, Manchester, Ormrod, Hardcastle & Co., Bolton; Reddish Spinning Company, Stockport; Thomas Rivett, Stockport; John Rostron, Bolton; Shaw, Jardine & Co., Manchester; George Swindells & Son, Macclefield; Thomas Taylor & Sons, Bolton; John Towle & Co., Derby; J. Towlson & Co., Derby; Wolfenden & Son, Bolton, and The Woodeaves Company, Derbyshire.

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[1] See also report from Manchester for further details.

Sir William H. Houldsworth, Bart., M. P., is chairman, and the principal companies concerned are represented on the directorate. It was pointed out in the prospectus that the consolidation of those allied industries was a guaranty for the outlet of a material portion of the combined productions and at the same time removed the element of unnecessary competition from both branches. The total purchase consideration for the land, mills, buildings, engines, boilers, shaftings, machinery, utensils, equipment, and good will was $16,291,000, and the price payable by the association for the stocks taken over amounted to $3,000,000, and the total purchase money to $20,058,000. During the first half year, 10 per cent was paid on the ordinary, 5 per cent on the cumulative preference, and 4 per cent on the debenture stock. The yield per cent on the ordinary at present is $15, on the cumulative preference $20, and on the debentures $15. For the first quarter of this year, the highest value of the ordinary was $10.58 and the lowest $8.88, the cumulative preference $6 and the lowest $5.28, while the debentures reached as high as 105½ and as low as 101½.

THE UNITED TURKEY RED COMPANY, LIMITED.

For a long series of years, the monopoly in Turkey-red dyeing and calico printing in Scotland was confined to a very small area, and the fierce competition threatened from outside, but more particularly in England, caused a new departure of things to arise in the formation of a strong and powerful combination known as the United Turkey Red Company, Limited, being formed in Glasgow. This combination acquired and developed the several businesses carried on by Messrs. Archibald, Orr, Ewing & Co., Turkey-red dyers and calico printers, Glasgow and Leverbank, Milton and Dillichip, Dumbartonshire; Messrs. John Orr, Ewing & Co., Turkey-red dyers and calico printers, Glasgow and at Alexandria, Dumbartonshire, and Messrs. William Stirling & Sons, Turkey-red dyers and calico printers at Glasgow and Cordale and Dalquharn, Dumbartonshire. The official registration took place on January 1, 1898, and the original capital of the company was $6,000,000, divided into 150,000 shares of $50 each, of which 75,000 were preference shares of $50 each, having preference over the ordinary shares in the distribution of capital upon winding up, and also a cumulative preferential dividend at the rate of 4 per cent per annum; and 75,000 were ordinary shares of $50 each. The first subscribers to the company were: Sir Donald Mathieson, K. C. B.; Sir A. E. Orr-Ewing, Bart., Mr. John Christie, Mr. James Templeton; Mr. William Henry Gilmour, Mr. Henry Brock, Mr. Alexander Henry Wylie, M. P., for Dumbartonshire; Mr. H. W. Maclean Christie, and Mr. John Norman Macdonald. The law agents of new formation are Messrs. Macgrigor, Donald & Co., West Regent street, Glasgow. Being a private company, the reports and quotations of shares are not issued to the public. The Turkey-red dyeing industry in Scotland at the time of the formation of the company was carried on in the vale of Leven, Dumbartonshire, about 20 miles from Glasgow, by the three firms mentioned. Their works cover a large area, and they employ about 4,000 hands. Large fortunes have been amassed in this industry in the past. After the amalgamation the profits fell a bit; but now they are larger.

THE LINEN THREAD COMPANY, LIMITED.

Following in the wake of the cotton combination, the above company was promoted in Glasgow on May 6, 1898, to carry on in the United Kingdom and abroad the business of manufacturers of and dealers in linen and other threads. The capital was $10,000,000, divided into 200,000 shares of $50 each, of which 100,000 were ordinary and 100,000 preference cumulative, bearing interest at the rate of 5 per cent per annum. The original subscribers were: Mr. John M. Barbour, manufacturer, Hilden, Lisburn; Mr. William Barbour, manufacturer, Warren Point, New Jersey, U. S. A.; Mr. R. W. Knox, manufacturer, Moorpark, Kilbirnie, Ayrshire; Mr. Frank Barbour, manufacturer, Hilden, Lisburn; Mr. James Finlayson, manufacturer, Merchiston, Johnston; Mr. W. B. Ardill, manufacturer, 47 Gresham street, London; Mr. James Finlayson, jr., manufacturer, Johnston; Mr. W. J. Finlayson, manufacturer, Johnston; Mr. Archibald Finlayson, manufacturer, Kilbirnie. The concern has a registered office at 180 Hope street, Glasgow, and Mr. James Finlayson, jr., is the secretary. The company is not quoted on the stock exchange list.

THE ENGLISH SEWING COTTON COMPANY, LIMITED.

The company, formed at Manchester in 1897, is a most powerful combination, and also includes linen thread, silk manufacturers, silk throwsters, and bobbin makers. The names of the firms in the combination are as follows:

Sir Richard Arkwright & Co., established in 1769; Edmund Ashworth & Sons, established 1800; Bagley & Wright, established 1867; Crawford Brothers, established 1775; John Dewhurst & Sons, established 1789; Ermen & Roby, Limited, established 1837; Ermen & Roby, established 1892; S. Manlove & Sons, established 1829; Marsland, Sons & Co., established 1798; J. T. Raworth, established 1820; C. A. Rickards, established 1862; W. G. & J. Strutt, established 1776; William Walker & Co., established 1830; J. & E. Waters & Co., established 1835, and George Wigley & Co., established 1867.

With the exception of Crawford Brothers, who have their mills in Beith, Ayrshire, all the other firms are English, and it may be mentioned that the valuation of the land, water rights, property, buildings, motive power, machinery, plant, leases, etc., purchased by the company was $3,000,000. A report by the directors, issued on March 10, 1900, shows the following allocation of capital: $500,000 first mortgage 4 per cent debenture stock at a premium of $10 per $500 pro rata to the debenture stockholders, as shown by the register on March 1, 1900, and 124,920 $5 ordinary shares at a premium of $3.60 per share pro rata to the holders of ordinary shares as shown by the 1900 register. The total authorized capital is $5,000,000 debenture stock, of which $4,250,000 was lately issued, and $500,000 now issued; $5,000,000 preference shares of 5 per cent, which are all subscribed; and $5,000,000 ordinary, $4,250,000 being already subscribed, and $500,000 now issued.

The dividend paid on the ordinary shares in 1898 was 10 per cent; last year, 7½; the approximate price, $9.12, while the highest price in 1900 was $9.36; the lowest, $8.04. The approximate price of the 5 per cent cumulative preference was $5.34 ex dividend; the highest reached this year, $5.58, and the lowest, $5.10. As to the first-mortgage debenture stock, bearing interest at 4 per cent, the approximate price is 102; the highest reached this year, 103¾, and the lowest 99¼.

GENERAL.

As to effects of trust combinations here, without undertaking to express my own opinion, I might say that they are regarded by the public as monopolies pure and simple. Still, there are those who contend that as much can be said in their defense as in condemnation. However, conservative opinion, I believe, holds that the enhanced prices which they command are not offset by the small consolation of slightly increased wages for the hands employed. Said one to me, who has given the question much consideration:

> The undoubted disposition of all those large trusts is to create a huge monopoly in keeping up prices, and dictating to customers the conditions under which the syndicates will trade. In Glasgow, say four or five years ago, speculation in whisky was a paying concern; the new companies floated were numerous, and in some cases, distillations from given distilleries were speculated upon at fictitious values.

The Government duty on the national beverage of Scotland then was $2.50 per gallon at a given strength (it was increased by 12 cents last year), and for blending purposes some samples from favorite distilleries fetched as high as $6 per gallon. Since then, however, the whisky ring, which was too large, began to shrink. Several failures in fact occurred in rapid succession, including the big one of Messrs. Pattison & Co., Leith, and others, and some of the companies were unable to pay dividends to their ordinary shareholders. The companies, however, that are carefully managed are doing very well, and although the profits have diminished a bit the steady increase of consumption, more particularly in England and the colonies, makes the beverage a safe investment.

In connection with the thread combination, every one knows what an immense impulse was given to it all over the world with the introduction of the sewing machine. When the companies who form the central agency, the popular name in Glasgow of the thread combination, were fighting for their own free hand, it is said that the thread was better in measure, not so liable to breakage, and a good deal cheaper. Customers got all the special advantages that were going, but now the speculating public, by dabbling in the shares, scoop the pools.

Nobel's Dynamite Company had a prosperous time of it after the combination, and paid big dividends to the ordinary shareholders, but the war in South Africa, which has touched the pockets of numerous industries in an adverse way, has had a serious effect on explosives owing to the mines stopping.

The combination in oils has not been so marked as in other industries in Scotland, in consequence of the formidable opposition of America and Russia; but the Scottish concerns, with new and improved machinery, are making a noble struggle against their powerful rivals, and the public are getting the benefit in cheap material and an excellent quality of oil.

Like their brethren in England, many of the beer brewers in Scotland have amassed large fortunes, but for a long series of years there has been little or no change in the price of the liquor to the consumer. It is a curious fact while Scottish beer can be had in all the public houses at 1½ pence (3 cents) per glass, a very large section of the consumers prefer to pay 4 cents per glass for English beer.

In connection with dyeing stuffs and chemical preparations, these have undergone a remarkable transition within the past few years, and the combinations among them have not tended to benefit anybody except the stock broker and company promoter.

Combination in the refining of sugar has had little or no effect on the markets in Scotland, in consequence of the bounty system in France and Germany, and speculators in that article of universal consumption have made little or nothing.

Collieries are on the boom at present in Scotland, and quite a number of new combinations have recently been formed, including the Edinburgh Collieries Company, Limited, which issued a prospectus in May last, to absorb coal fields, ironstone, and fire clay in several districts, and issued 225,000 ordinary shares of $5 each at par to accomplish it. The share capital now stands at $2,000,000. These additional collieries will enable the old company, so says the prospectus, to raise the output to 1,000,000 tons per annum. Another is the Morningside Coal and Fire Clay Company, with a capital of $500,000, divided into 35,000 6 per cent cumulative preference shares of $5 each, and 75,000 ordinary shares of $5 each. The original company (private) was formed in 1896. The price of coal at present is very high, the retail quotation for household being 28 cents per hundredweight, or, when taken in ton bulk, about $5.76 per wagon of 24 hundredweight. Miners are earning from $1.56 to $2 per day.

SAMUEL M. TAYLOR, *Consul.*

GLASGOW, *August 24, 1900.*

SUPPLEMENTAL.

Consul Taylor sends from Glasgow, September 18, 1900, extract from the Daily Mail of that city, containing editorial comment upon a discussion which took place in the chamber of commerce of Glasgow, as follows:

COMBINATION AND COMPETITION.

The Glasgow chamber of commerce had sense enough yesterday to reject Mr. John Galloway's curious motion regarding "the combination of limited and other companies into large associations, trusts, syndicates, or combines." What was proposed was that the chamber should petition the Government to take such steps as seemed to them right for preventing such combinations being formed. Had such a petition been received by the Government, they would certainly not have thought it right to take any steps in the desired direction. Freedom of combination for trade purposes is not a thing with which any government in this country would care to meddle, though no one will deny that evils may arise from the operations of these great trade trusts. Having so much power, they may use it unfairly, to the injury of smaller manufacturers, and perhaps also to the injury of the consumers. Mr. Galloway recited a number of possible evils and hardships. He said that one of these syndicates might purchase all the raw material for any given manufacture. It might, but we have known of this being done by a single firm long before the name of "combine" had been heard. Such a course is not at all new. It is about as old as trade competition. As for "cornering the market," that also was an operation known before the days of the syndicates. Fortunes have often been won and lost in the risky game. We venture to doubt the statement that the trusts are able to carry everything roughshod over the heads of their employees.

As a rule, the combinations of employees are quite strong enough to take care of themselves when there is any legitimate cause of dispute; and whenever any attempt is made to subject them to unjust treatment, public opinion comes to their aid with an influence that can not be withstood. It might be interesting to consider how far the combination of employees has led to the combination of employers. It is true that a manufacturers' combine aims at having the power, and may obtain the power, of fixing the price of the article produced, and that thus the cost may be increased to the consumer without what could be called a just cause. As a matter of fact, there are cases in which this has been done. It is also true that the holding of a virtual monopoly involves to a large extent the power of crushing rivals. But is it not the case that such courses are certain to rouse opposition? A monopoly is a thing to be attacked by every man who is not in it. Those who feel it oppressive will rise against it. Where a big profit is being gained by monopolists, idle capital will soon be employed in opposition to gain a share. Wherever money is being made by syndicates, competition will spring up in spite of all their power. They will have their day, but the next day they will have to fight for their existence. The things that are complained of are passing phases, and they will practically right themselves in no great time. In fact, they challenge remedies, and the challenge can not stand long unaccepted. As for the proposal that a law should be passed making the formation of a trust impossible without a license from a Government department, it does credit to the ingenuity, or, shall we say the simplicity, of its author; but it can not for one moment receive serious consideration. In a free country such as ours, there can be no law against freedom of combination for commercial purposes. The remedy that is required is not legislation but competition.

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